ENVIRONMENTAL ASSESSMENT II FOR THE PROPOSED

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PREPARED FOR

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BY

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### INTRODUCTION

This report summarizes the results of a second environmental assessment of the proposed Westpark Commercial Center properties. The first assessment was initiated on October 23, 1987, when Pacific Rim Development Corporation retained the services of the environmental consulting firm Special Resource Management, Inc. (SRM) to conduct a routine site investigation of the Westpark property. Along with the collection of basic soil engineering data, the first site investigation was intended to provide sufficient data to document the presence or absence of any hazardous materials on-site. As part of the investigation a series of soil and groundwater samples were collected for laboratory analysis. Analysis of one of the water samples suggested the possible presence of a chlorinated solvent at relatively low levels (SRM, 1987).

Special Resource Management, Inc. was authorized by Pacific Rim Development Corporation (PRDC) to conduct additional groundwater and soil testing in the area of monitoring well #1. This area was identified in the earlier screening assessment as being potentially contaminated with tetrachloroethene (Well #1 showed 738 ppb and soil #2 showed 1600 ppb).

The first assessment report contains an overview of the 50+ acre properties and a description of the field sampling methods and laboratory results. The detection of tetrachloroethene in Well #1 was the most significant finding of the first assessment. Other findings included: trace volatile petroleum products (old diesel) in Wells #1, 2, and 3; trace (.5 ppm) chloroform in soil sample #2; and several potential spill areas that warranted further assessment (SRM, 1987). This second report also includes the references sited in the first environmental assessment report, the sample results for the volatile petroleum product analysis and the verification sample results that were run on Well #1.

#### **PURPOSE**

The purpose of the second assessment was to obtain additional ground-water and soil data to better characterize the extent of tetrachloroethene contamination in the area of Well #1. The general uncertainty of the source and extent of contamination dictated a step-by-step method of investigation for the second site assessment. It was agreed that SRM would install ten to fifteen monitoring wells and obtain 20 to 30 soil samples in the area of Well #1. This level of effort was considered adequate to characterize the area if minor contamination was present. If a major plume or spill of tetrachloroethene existed, additional assessment would probably be required, but enough data would be available (13 to 18 wells and 20 to 30 soil samples) to design a cost effective strategy for assessing a major contamination problem and possibly identify the source of contamination.

The second investigation was to utilize standard EPA methods so that the resulting data would be of adequate technical content to support the evaluation of remedial alternatives. In addition, Parcels 2 and 5 were to be assessed in terms of whether they were contaminated or impacted by the contamination detected at Well #1.

## ENVIRONMENTAL SAMPLING METHODOLOGY

# Soil Sampling

Locations - The soil sampling locations selected for the second assessment were based on information garnered during the first assessment. SRM identified several areas within Parcel #1 where soils were discolored and where small amounts of solid waste had been dumped (SRM, 1987). These areas near Well #1 were selected for soil sampling to determine if they were potential sources of groundwater contamination. In addition, the area surrounding Well #1 was gridded and thoroughly sampled.

Soil sample locations are shown on the site maps in Appendix A. Appendix H provides a summary of the dates when samples were collected and the laboratory which analyzed the samples. Appendix D contains the laboratory reports for the soil samples.

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The following summary groups the samples by the general collection method:

Non-Random Composite grab samples in potential spill areas -NT1, NT2, NT4, LD1, LD2, BD1, BD2, LD1-1.5F, S-24, S-25

Composite Grid Samples Immediate to Well #1 - S-9 through S-17

Composite Samples Outside Grid Near Wells #4, 5, 7, and 8 - S-5, S-6, S-7, S-8

Auger Grab Samples at 1.5 feet near Well #1 -  $S-18-1.5\bar{F}$ , S-19-1.5F, S-20-1.5F

Grab Repeat of Soil #2, subsample location d - S-21

Grab of Soil 5 ft. depth, Well #13 location - S-22

A total of 31 soil samples were collected and submitted for analysis. Of these, 3 were splits sent to different laboratories (16a and NT2a, 24a) and one sample (BD-1) was sent to both laboratories for analysis (same sample, not a split). Therefore, 28 locations were sampled and 4 samples were analyzed by both laboratories. Seven (7) samples were sent to the Professional Service Industries Laboratory, Deer Park, Texas, and 2 samples were sent to SERCO Laboratories, St. Paul, Minnesota, for all the EPA priority pollutant volatile organic compounds (Method SW 8240) while 22 samples were analyzed by Analytical Laboratories, Boise, Idaho, for tetrachloroethene only.

The procedures utilized for obtaining the soil samples Procedures. were similar to those used in the first soil sampling effort. The sample handling procedures and laboratory analysis were conducted according to Most of the soil samples consisted of four subsamstandard EPA methods. ples composited. For all but three of the composite samples, the subsample consisted of two soil cores (0-6") taken side-by-side at the subsample loca-The soil core was extracted using a seven-eighth inch diameter carbon steel-chrome plated probe. For two of the three composite samples not utilizing the core sampler (NT1, NT2), the subsample was obtained by removing the top two inches of soil and extracting 118 ml of soil in a stainless steel scoop four times. The four subsamples were composited and mixed in a stainless steel bowl. After briefly mixing, the sample was placed in a prelabeled glass sample jar and sealed with a teflon lined lid. After wiping the jar clean and checking the label for completeness, the samples were placed on ice in an ice chest.

Two different methods were utilized for identifying the 4 subsample locations for the composite soil samples. Five of the samples (NT2, NT4, LD1, LD2, LD1-1.5F) were in the bottom of irrigation or drainage ditches. A representative sample of the ditch bottom soil was obtained by taking the four subsamples in a straight line on 5 foot intervals in the bottom of the ditch. Subsamples for NT1 were also taken in a straight line, but they were taken down the west bank of the drainage ditch at 1 foot intervals starting from the fence line.

Five soil samples were taken at a depth of 1.5 feet to help assess whether soil contamination existed below surface soils (NT4, LD1-1.5F, 18-1.5F, 19-1.5F, 20-1.5F. S-22). For four of the samples, a four inch diameter soil auger was used to bore to 1.5 feet and then a stainless steel scoop was used to extract 472 ml of soil from the bottom of the bore hole (samples NT-4, 18-1.5F, 19-1.5F, and 20-1.5F). Sample LD1-1.5F was obtained by extracting two soil cores from four 1.5 foot bore holes adjacent to the four surface subsample locations for sample LD-1.

Soil sample 21 was obtained by extracting and compositing 12 soil cores in a 12" by 12" square. This sample is considered a grab since only a small area of soil was represented. Soil sample S-22 was a grab sample off of the hollow stem auger while drilling Well #13. It was soil taken from approximately the five foot level. Soil samples S-24 and S-24a were a composite of two locations within the base of the old grain silo. The soil floor base inside the silo lies approximately three feet below grade. The sample was collected by removing 2 inches of surface soil and collecting the sample with a shovel at a depth of 2-8 inches. Two locations within the silo were composited. Soil S-25 was a shovel grab sample from a pile of washed gravel dumped 29 feet east of the silo. A one foot hole was dug to the base of the pile and the sample was collected at the interface of the piled gravel and surface soil.

The remaining soil sample-subsample points (5 through 17) were identified at four equally spaced locations on a one meter are centered at the sample location stake. The equally spaced locations were designated as the four points of the compass--North, South, East, and West. Figure 1 "Soil Sample Locations Utilizing the Arc Composite Method", illustrates this sampling method. It was utilized for the grid samples (9 through 17) and the four samples taken near wells #4, 5, 7, and 8 (samples 5-8).

Sample collection tools (core sampler, stainless steel bowls, auger, scoop) were cleaned according to the following procedures before taking each soil sample:

- 1) washed and scrubbed with distilled water and a non-phosphate detergent,
- 2) inspected for adhered soil particles and rewashed if necessary,
- 3) rinsed thoroughly with distilled water,
- 4) rinsed thoroughly with acetone,
- 5) rinsed thoroughly with hexane, and
- 6) shaken and let air dry until needed for sampling.

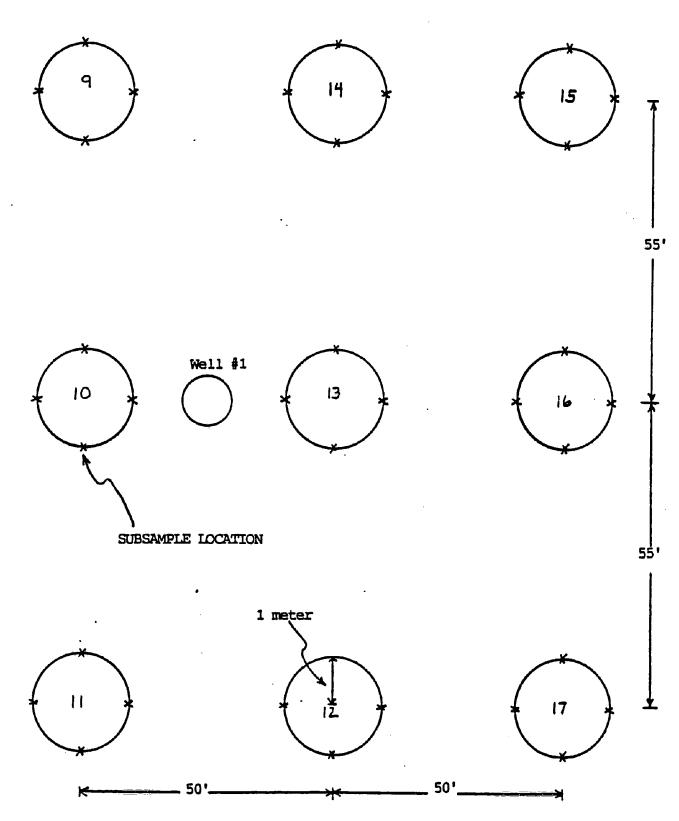


Figure 1 Soil Sample Locations Utilizing the Arc Composite Method

Clean PVC gloves were used for each sample collection. An equipment decontamination sample (WP-decon) was taken during soil sampling on 11/23/87 by running distilled water over the cleaned equipment and collecting it for laboratory analysis. It should be noted that the quantity of soil collected for each sample was sufficient to fill the sample jar (light pack with no headspace).

All of the samples (soil and water) collected from the Westpark site were considered to be environmental samples. Sample containers were placed immediately on ice in a steel ice chest, upon collection in the field. At the conclusion of field sampling, the iced samples were placed in locked storage under the custody of Bradley Harr or Mark Kraley until transferred for delivery to the appropriate laboratory.

The chain of custody record sheets were maintained throughout sample transfer. The originator signed the "Relinquished by" box while the person receiving custody signs in the adjacent "Received by" box and keeps the original. The original copy remained with the samples at all times. A copy of each chain of custody form is shown in Appendix G.

# Groundwater Sampling

Monitoring Well Installation and Groundwater Sampling Methods. On November 20, 1987, five observation wells (SRM-4, 5, 6, 7 and 8) were drilled with a Mobile B53 hollow stem auger rig equipped with six inch auger flights. The wells were cased with two inch PVC casing and perforated with .020 factory slotted PVC pipe. Caps were installed at the bottom and no glue was used. Each well is perforated opposite gravel in a silt and clay matrix and a natural gravel pack was utilized. The annulus was sealed with about 6 to 20 inches of bentonite, backfilled with cuttings to within one foot of the surface, and sealed with a bentonite surface seal. A bentonite sample was taken during the installation of Well #7 and analyzed for tetrachloroethene (BG-001). No tetrachloroethene was detected in the bentonite.

On November 21, 1987, the wells were developed by hand bailing with a PVC bailer. To remove as much silt and clay as possible, the wells were surged by lowering the bailer to the bottom of the well and surging it vigorously several times each time the bailer was removed. Five gallons (which represents 5 to 10 well bore volumes) was removed from each well and stored in a drum for disposal later. Waters were tested for pH, conductivity, and temperature in the field using an Orion pH meter and a YSI conductivity meter. The field results are reported in Table 1. The bailer was decontaminated between wells by washing with a phosphate free detergent followed by distilled water, acetone and hexane rinses. Well 1 was also bailed to clean and further develop it.

Wells 1, 4, 5, 6, 7 and 8 were sampled on November 23, 1987, with a teflon bailer. Three well bore volumes were removed (and stored for later disposal) by bailing slowly at rates of from .05 to .15 gallons per minutes after which the wells were allowed to stand for five minutes before the sample was taken. The bailer was decontaminated between wells using the procedure described above. The samples were managed similar to the procedures discussed above for soil samples. Two VOA vials were filled for each sample. Samples were distributed to the two laboratories such that 20% went to PSI and 80% to A.A.

TABLE 1

WELL DEVELOPMENT FIELD PARAMETERS

November 21, 1987

<u>Well</u>	pН	Conductivity (umhos/cm)	Temperature (°C)
SRM-1	7.6	501	13.4
SRM-4	7.5	<b>638</b> ,	14.4
SRM-5	7.6	337 ⟨-	15.5
SRM-6	7.7	578	13.3
SRM-7	7.7	483	12.9
SRM-8	7.6	614	13.9
·			

Well drilling permits were obtained from the Idaho Department of Water Resources on November 19, 1987 so that the three deep wells could be constructed (Wells 9, 10, & 11). The three deep wells were located so that Well 11 was on Parcel #5 and up gradient of Well 1; Well 9 was on Parcel 1 and directly down gradient of Well 1; and Well 10 was on Parcel 2 and slightly north of down gradient flow from Well 1.

Wells 9, 10, and 11 were drilled with the Mobil B53 drill utilizing air rotary and driving casing on December 3-5, 1987. Well logs and construction information are in Appendix J. The deep wells were drilled to the clay sediments underlying the aquifer gravels. The deep wells were installed by drilling and hammering 4 inch steel casing to approximately 20 feet and then drilling and hammering 3 inch steel casing through the 4 inch casing to the clay sediments at approximately 40 to 45 feet. The three inch casing was pulled after setting the 2 inch PVC well casing. A 5 foot sump was located below the screened interval in each well. The bottom 15 feet of the aquifer was screened in Wells 10 and 11 while the bottom 20 feet were screened in Well 9. A natural sand and gravel pack was utilized from the bottom of the well to the 20 foot level. The 4 inch steel casing was left in the borehole and the angular space was sealed with a bentonite slurry (0 to 18 ft.). Two foot of #8 silica sand was placed in the angular space (18 to 20 ft.) prior to sealing with the bentonite.

The drilling equipment and casing materials were steam cleaned before starting each well. The deep wells were developed as described earlier for the shallow wells. The development water and drilling water and cuttings were containerized pending laboratory analysis so that proper disposal could be arranged.

The deep wells were sampled on 12-7-87 after purging three well volumes. Well 11 was purged by bailer while Wells 9 and 10 were pumped (less than 1 gallon/minute). A KV-30 submersible centrifugal pump was dedicated to each of the wells (9 and 10). Samples were extracted after letting the wells recover from purging for five minutes. A clean teflon bailer was used to extract the samples. The samples were taken at approximately the 32 to

34 foot level which would be near the center of the screened interval of the wells. A duplicate sample was taken at Well 9 so that analysis could be completed by both laboratories being utilized. In addition, a sample was taken at the bottom of Well 9 (sample WP-Well 9b) to assess whether there was any layering of tetrachloroethene in the aquifer.

On December 15, 1987, Well #12 was installed. The hole had been augered earlier but due to equipment problems it was not completed until 12-15-87. Well #12 (shallow 17 ft.) was constructed such that the saturated zone is screened and cased with stainless steel (Johnson (304), 0.02 inch slots). A PVC riser is used in the unsaturated zone. Well #13 was drilled and installed on 12-16-87. It is constructed of PVC casing. The hollow stem auger was rejected at three locations near Well #13 and after the third rejection, a backhoe was used to penetrate the calachie and hard packed surface gravel (0-7 feet). The hole was then completed with the hollow stem auger. Wells 12 and 13 are shallow wells installed to a depth of about 17 feet. The bottom five feet of the wells are screened (12-17 foot interval). They were completed and sealed as described earlier for Wells 4, 5, 6, 7, and 8.

An auger decontamination sample was obtained after steam cleaning the auger before drilling Well #13. Clean distilled water was run through the hollow area of the auger and collected in a VOA vial. The sample (WP-Decon #2) was analyzed for tetrachloroethene. No tetrachloroethene was detected (mdl=5ppb).

Well #12 was sampled on 12/16/87 while well #13 was sampled on 12/17/87. The sampling procedures were the same as discussed earlier for the shallow wells (i.e., 3 well volumes purged; clean teflon bailer).

Since most of the wells were sampled shortly after their installation and in different laboratory lots, it was decided that six wells would be sampled on the same day and submitted to two laboratories for analysis. These samples were collected on 12/18/87 using the methods previously discussed for each well (samples - Well 1d, 5d, 7d, 9d, 12d, 13d, 1e, 5e, 7e, 9e, 12e

and 13e). Samples 1d to 13d were submitted to Analytical Laboratories while samples 1e to 13e were submitted to Professional Service Industries, Inc.

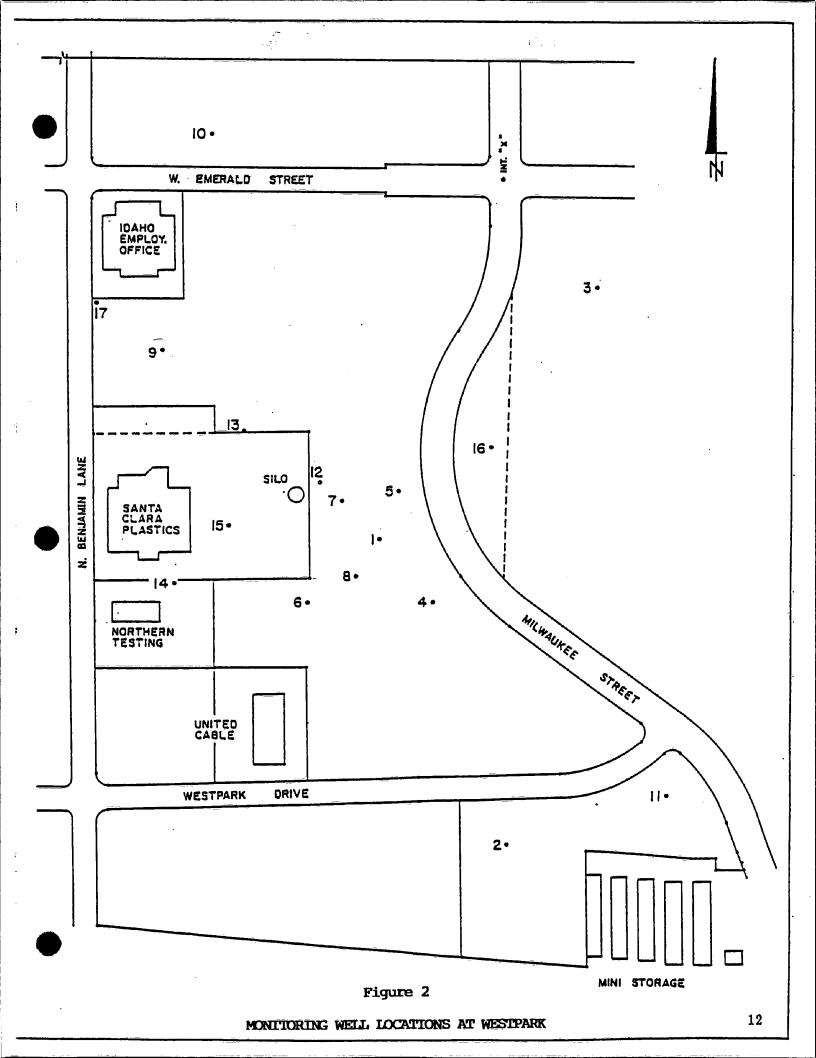
Upon review of the laboratory results from the 12/8/87 well sampling, it was determined that four additional shallow wells would be installed to better characterize the extent of the plume. The uncertainly of the plumes origin was a key factor in locating new wells since several businesses in the immediate area were potential users of tetrachloroethene.

Permission was obtained to drill on private property to the west of Westpark since no information existed in this area (Wells 14 and 15). The drill rig augers were steam cleaned prior to drilling each well. Well 16 was located on the east side of Milwaukee to better define the upgradient end of the plume. Well #17 was located on the far west edge of Parcel #1 in line with the expected flow of contaminants.

The wells were installed on January 9th and 10th in accordance with the methods described for the other shallow wells except that a larger drill rig was utilized (Central Mining Equipment-75, 8 inch hollow stem auger). Wells 14, 16, and 17 were constructed with stainless steel in the saturated zone (similar to Well #12) while Well 15 was constructed with PVC. Wells 14, 16 and 17 are screened at the 12-17 foot interval while Well 15 is screened from 7-17 feet. The wells were developed on 1/12/88 and sampled on 1/13/88.

All of the Westpark monitoring wells have locking caps. Wells 1 and 4 through 17 are completed with protective 6 inch steel casing and concrete pads (see photograph documentation). The monitoring well locations are show in Figure 2.

PVC casing is generally not recommended by the EPA for monitoring well construction at RCRA (Resource Conservation and Recovery Act) hazardous waste sites where long term monitoring for volatile organics is required. The reasons given by EPA include deterioration of PVC wells over the 30 year monitoring period and that PVC may absorb constituents or leach constituents into the well water. EPA's policy is reasonable and prudent for thirty year RCRA monitoring wells at commercial hazardous waste disposal sites.



For general site characterization the EPA allows for site-specific discretion in selecting monitoring well construction materials. In general, the policy states that the well casing and screen materials should be selected with due consideration to geochemistry, anticipated lifetime of the well, cost, chemical parameters to be monitored, and other site-specific factors (U.S. EPA, 1986). Given the circumstances of the Westpark site investigation—site assessment, one or two sampling events, and possible near-term commercial construction in the area, PVC casing is the preferred material. Any long term monitoring wells should be constructed utilizing stainless steel in the saturated zone. The sample results from the stainless steel wells (Wells #12, 14, 16, and 17) installed at Westpark correlate well with the results of nearby PVC wells. There is no evidence indicating that the PVC wells are not yielding good sample results.

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Table 2, "Monitoring Well Installation Summary", summarizes the well completion and sampling dates. It should be noted that the first three wells #1, 2, and 3 were drilled to approximately 13 to 14 feet. The remaining shallow wells were to be drilled to approximately 17 feet, however, sand heaving in Well #6 pushed the casing up to 12 feet resulting in the screened interval being at approximately 7.5 feet to 12 feet.

## Aquifer Testing and Plume Modeling

On January 7, 1988, a small sampling pump was installed in Well 11 and the well was pumped at a rate of 1 gpm for 20 minutes. After 4 minutes the well stabilized with an average drawdown of about 0.196 feet indicating a specific capacity of about 5.1 gpm per foot of drawdown. A transmissivity of about 10,200 gpd/ft can be calculated from that specific capacity. Results of this pumping suggested a need for a larger pump to test the aquifers. The well was retested with an air operated diaphragm pump on January 12, 1988, for 35 minutes at a rate of 3.5 gpm. A longer test was planned, but mechanical problems and cold weather limited the test. Results of the testing on January 12, suggest a transmissivity of 12,700 gpd/ft and a storativity of 0.0000007 which is lower than what would be expected possibly due in part to poor well efficiency.

TABLE 2
MONITORING WELL INSTALLATION AND SAMPLING SUMMARY

MON. WELL NUMBER	DATE COMPLETED	DATE SAMPLED	TOTAL DEPTH (ft) (approx.)	SCREEN INTERVAL (ft) (approx.)
1	10/29/87 am	10/29/87 pm 11/02/87 11/23/87 12/18/87	14	9-14
2	10/29/87 am	10/29/87 pm	13	8-13
3	10/29/87 am	10/29/87 pm	13	8-13
4	11/20/87	11/23/87	17	12-16.5
5	11/20/87	11/23/87 12/18/87	17	12-16.5
ь	11/20/87	11/23/87 12/31/78	12	7.5-12
7	11/20/87	11/23/87 12/18/87	17	12-16.5
8	11/20/87	11/23/87 12/31/87	17.5	12.5-17
ý	12/05/98	12/07/87 12/18/87	45.0	20-40
10	12/03/87	12/07/87	45.0	25-40
11	12/04/87	12/07/87	43	23-38
12	12/15/87	12/16/87 12/18/87	17	12-17 (SS)
13	12/16/87	12/17/87 12/18/87	17	12-17
14	1/09/88	1/13/88	17	12-17 (SS)
15	1/09/88	1/13/88	17	7-17
16	1/10/88	1/13/88	17	12-17 (SS)
17	1/10/88	1/13/88	17	12-17 (SS)

SS - Johnson 304 Stainless Steel casing and screen (0.02 inch slots), all others are PVC casing

Well 8 was tested on January 13, 1988, using the diaphragm pump. Owing to problems with frozen hoses the pumping rate was higher than the 1 gpm which was planned and the pump started drawing air after about one minute. A decision was made to run the test at a constant drawdown for long enough to pump 55 gallons by allowing the pump to draw air, thus maintaining the water level at the end of the suction hose. A transmissivity of 46,000 gpd/ft was calculated.

Aquifer test data, water level information and estimated dispersivities supplied by a Montana Bureau of Mines and Geology hydrologist familiar with data from similar areas of Oregon and Nevada, (Brian Harrison, personal communication 1/88) were used in a model published by Kent and others (Kent, 1985), in an attempt to quantify the age and extent of the contamination. Dispersivities for sediments such as the terrace gravels found at the Westpark site would be expected to range from 0.3 ft. to 2 ft. Typically when trying to fit sparse data to a model the dispersivities are increased by one or two orders of magnitude. In this case, the best fit was obtained by increasing the estimated values by a factor of about 20.

A fairly good fit with the model was obtained for the concentrations found in wells 9 and 17 for a spill of two drums occurring about one year ago. Estimated contours of equal concentration are shown in Figure 3) Longer and shorter time periods with varying quantities were tried without success. The model predicted a fairly rapid drop in concentration on the northwest end of the plume. Given the current concentration at Well 17 this appears unlikely and it suggests that given further assessment a better fit could be obtained with this model. Based on the concentrations shown in Figure 3, approximately 40 to 50 gallons of tetrachloroethene is in the groundwater at present. Allowing for volatilization and adsorption on soil, a reasonable estimate of the amount originally spilled is probably about 2 drums (110 gallons).

## Miscellaneous Sampling

Locations - Several miscellaneous samples were collected throughout the course of this assessment. In general, the samples were for QA/QC purposes, grab samples of unknown substances or debris, or grab samples for assessing the proper disposal methods for materials generated during the drilling and sampling of wells. Appendix H - "Sample Collection Summary" contains the sample collection information and SRM sample numbers for the miscellaneous samples. Appendix F contains the laboratory results for the samples.

<u>Procedures</u> - Standard EPA methods were utilized for collecting, handling, and storing the miscellaneous samples collected. The drummed well development and purge water was either sampled when it was being added to the drum (Drum 2 and 3) or after the drum had been filled (Drum 1). All contained well drilling and sampling materials are stored at the Westpark site.

The grab samples of debris, bentonite, and water were collected and placed in glass jars with teflon lined lids. The samples were placed on ice until delivered to the appropriate laboratory. VOA vails were utilized for the water samples.

Table 3 summarizes the miscellaneous samples that were collected.

TABLE 3
MISCELLANEOUS SAMPLE COLLECTION SUMMARY

SRM Sample #	Date	Comment
SRM-WP-DB-001	11/12/87	Grab sample of rubber sack material found by Well #1
SRM-WP-DB-002	11/12/87	Grab sample of rubber sack material found by Well #1
SRM-WP-W-1003	11/12/87	Grab sample of puddled water in ditch east of NET
SRM-WP-BG-001	11/20/87	Bentonite powder used to seal wells
SRM-WP-Decon	11/23/87	Soil sampling equipment decontamination blank
SRM-WP-Drum 1	12/2/87	Grab sample from composite of Wells 1,4,5,6,7,8
SRM-WP-Drum 2	12/2/87	Grab sample from composite of Wells 1,4,5,6,7,8
SRM-WP-Drum 3	12/2/87	Well development water from #11
SRM-WP-Well #10 Pit	12/2/87	Grab samples from well #10 mud pit
SRM-Well #9 Pit	12/4/87	Grab sample from well #9 mud pit
SRM-WP-Decon #2	12/16/87	Auger equipment decontamination blank after steam cleaning
SRM-WP-SCP-SEW	12/22/87	Sewer manhole on Benjamin, South of Idaho Employment Office 4:40 p.m.

#### LABORATORY RESULTS AND DISCUSSION

A total of 28 soil locations and 17 groundwater monitoring wells were sampled. Eight wells have been sampled more than once. Three laboratories were used for the soil and water sample analysis. Two of the labs utilized full EPA QA/QC procedures and analyzed for all the priority pollutant volatile organic compounds—Professional Service Industries (PSI), Deer Park, Texas and SERCO Laboratories, St. Paul, Minnesota. The third lab, Analytical Laboratories (A.A.), Boise, Idaho, analyzed for tetrachloroethene only. Analytical Laboratories used standard EPA methods for analysis and could often report results verbally the same day sampling took place. The quick turnaround was beneficial and the results were consistent. Full EPA QA/QC procedures were not utilized since the AA laboratory was just starting to operate their gas chromatograph and the Westpark samples were the only samples being run for volatile organics. A fourth laboratory, Idaho State Laboratory, Boise, Idaho, was used once to verify the initial contamination found in Well #1 and to test for volatile petroleum products.

## Laboratory Comparability

Several different laboratories were used to help verify the level of tetrachloroethene contamination at Westpark. When different laboratories are utilized there will be some variability in the analytical results. Twelve of the samples taken at Westpark were split between different labs so that a comparison of the results could be made. Four soil samples and eight water samples were split between labs. The results are summarized in Table 4.

No significant tetrachloroethene was detected in any of the split soil samples. This indicates good comparison between labs but leaves some uncertainly since no values could be compared directly. The SERCO lab reported a low value for soil sample SRM-WP-S-24 (23 ppb) while AA reported none detected. AA's minimum detection limit for tetrachloroethene in soil was 250 ppb.

TABLE 4

TETRACHLOROETHENE VALUES FOR SAMPLES SPLIT BETWEEN LABS

Sample	<u>Matrix</u>	PSI	AA	% Difference*
SRM-WP-NT-2	Soil	none detected	none detected	
SRM-WP-S-16	Soil	none detected	none detected	_ <del></del>
SRM-WP-SG-BD1	Soil	none detected	none detected	
SRM-WP-Well 1	Water	1228 ppb (Nov 23)	1550 ppb (Nov 23	-20.8
SRM-WP-Well 9	Water	660 ppb (Nov 23	1040 ppb (Nov 23	-36.5
SRM-WP-Well 6**	Water	19 ppb (Nov 23	22 ppb (Dec 31	-13.6
SRM-WP-Well 8**	Water	77 ppb (Nov 23	) 100 ppb (Dec 31	-23.0
		SERC	AA	
SRM-WP-Well 14	Water	none detected	none detected	
SRM-WP-Well 15	Water	35 ppb	70 ppb	-50.0
SRM-WP-Well 16	Water	14 ppb	13 ppb	+ 7.7
SRM-WP-Well 17	Water	2100 ppb	1160 ppb	+81.0
SRM-WP-S 24	Soil	28 ppb	none detected	

<sup>\*%</sup> difference equals  $(\frac{PSI \text{ or } SERCO - AA}{AA})$  x 100

<sup>\*\*</sup>Wells 6 and 8 were not true split samples since they were sampled on different days.

The results for the eight split water samples were for the most part fairly consistent. PSI's results were consistently about 300 ppb lower than AA for samples in the range of 1000 ppb. The two results given for Well #17 (SERCO: 2100 ppb; AA: 1160 ppb) were not as consistent as the values for the wells with lower levels of contamination. In conversations with the various labs, it appears as though the methods and timing for diluting concentrated samples is the most likely factor contributing to differences in the samples around 1000 ppb. The results of a set of six water samples sent to PSI on 12/18/87 were rejected by SRM due to unacceptable quality control data.

Given that tetrachloroethene is a volatile compound and that some variability will exist in the well water and that some variability will be introduced during the field sampling, the laboratory results are probably within plus or minus 20 to 50% of the true values in the aquifer at the different wells. The EPA recommends that the variability at a single laboratory not exceed plus or minus 25% for tetrachloroethene. The repeatability over time and between labs has been good for a short term assessment of this type (i.e., 4 months). The water samples taken at Westpark are not filtered (per EPA guidelines) and the silt may be contributing to some of the variability within the individual well samples.

## Soil Analysis

The following discussion summarizes the results of the soil sampling completed at Westpark. The complete laboratory results are given in Appendix D and the sampling locations are shown on the site maps in Appendix A.

Most of the soil samples taken contained no detectable tetrachloroethene. The minimum detection limit (MDL) varied with the lab doing the analysis, but all the MDL's were low enough for identifying potential spill areas (MDL for tetrachloroethene in soil: AA-250 ppb, PSI-300 ppb, SERCO-2 ppb).

Tetrachloroethene was identified in soil sample #7 (.255 ppm), #11 (trace, less than 3 ppb) and #24a (28 ppb). These values are relatively low and could be a result of vehicle traffic in the area tracking drill cuttings from nearby wells and soil test pits or it could be trace tetrachloroethene that has volatilized through the underlying soils that are contaminated from the groundwater. The values are low enough and far enough apart that it is doubtful they resulted from a direct surface spill of tetrachloroethene.

The summer of 1987 was unusually hot and dry in southern Idaho which would tend to volatilize the tetrachloroethene in the surface soils. There is no visual evidence of a chemical spill in the area where trace levels of tetrachloroethene were found in the soil. All of the Westpark soil samples taken at depth contained no detectable tetrachloroethene.

The soil samples submitted to PSI and SERCO were analyzed for all the ERA priority pollutant volatile organic compounds (method SW 8240) (samples NT-2a, NT-1, S-5, S-11, S-13, S-24a, S-25, BD-1, and S-16a). Sample NT-2a was also analyzed for metals. The metal analysis shows a five fold increase in the lead content of sample NT-2a (49.5 ppm) as compared to an average of the three soil samples (9.2 ppm) taken in the first assessment for Westpark. The 49.5 ppm lead level is not significant in terms of hazardous soil contamination and it may be the result of lead in spilled used motor oil.

Table 5 summarizes the volatile constituents found by PSI and SERCO in the nine soil samples.

TABLE 5

VOLATILE COMPOUNDS IDENTIFIED IN NINE SOIL SAMPLES SUBMITTED TO PSI AND SERCO (ppm)

Volatile Compounds Identified in Nine Soil Samples Submitted to PSI and SERCO (ppm)

Sample #	Tetrachloro- ethene	Dichloro- methane*	Ethyl- benzene	1,2 Dichloro- ethene
S-5a	ND**	4	ND	3.5
S-11	Trace	3	ND	ND
NT-1	ND	6	ИĎ	ND
NT-2	ND	4	1.3	ND
S-13	ND	ND	ND	ND
S-16a	ND	ND	ND	ND
BD-1	ND	ND	ND	ND
S-24a	.028	ND	ND	ND
S-25	ND	ND	ND	ND

<sup>\*</sup>Dichloromethane is also called methylene chloride.

Given the 1000 to 2000 ppb levels of Tetrachloroethene found in Wells 7 and 12 there is a high probability that tetrachloroethene exists in the soils at the water table-soil interface. The groundwater level at Westpark fluctuates seasonally with the percolation of irrigation water from nearby canals and farm land. The water table drops in the fall when the irrigation water is shut cff. As the groundwater drops some tetrachloroethene will be adsorbed to the soil in the area of the plume. The concentrations that will

<sup>\*\*</sup>ND indicates none detected

exist at this interface will be a function of the groundwater concentration, upper soil concentrations and the equilibrium partition coefficient for the tetrachloroethene (other minor factors exist, but their influence would be small). An assessment of how much tetrachloroethene would be leached from these soils by precipitation or rising groundwater is beyond the scope of this study. The total amount of tetrachloroethene that could leach from the Westpark soils is highly dependent upon whether the spill site is on Westpark property and how long ago the spill occurred. If the spill is recent, concentrations in the Westpark groundwater could increase with time and then diminish as the plume migrates down gradient. If the spill occurred some time ago, one would expect the concentrations to diminish with time as the tetrachloroethene is leached from the soil and the plume migrates down gradient. If the spill was southeast of the Westpark properties there should not be any substantial soil contamination on the Westpark site.

#### Groundwater Analysis

Seventeen groundwater monitoring locations were sampled during the second environmental assessment (11/23 to 1/13) of the Westpark properties. A total of 29 groundwater samples were collected for analysis. Of these 29, 21 were analyzed for only tetrachloroethene (AA Laboratory) while 8 were analyzed for the full suite of volatile organics (SERCO and PSI Laboratories). Complete laboratory results are shown in Appendix E. A brief discussion of the comparability of the laboratories was given previously in the soil results section. The groundwater sampling results are summarized in Table 6 (all concentrations are ppb).

Tetrachloroethene is the most predominant groundwater contaminant identified at the Westpark site. Trichloroethene has been measured in the range of 3 to 13 ppb in the wells that have the highest concentrations of tetrachloroethene. Trichloroethene is a primary breakdown product of tetrachloroethene (Cline, 1984). In general, the highest concentrations measured are in the area of monitoring wells #7 and #12. It should be noted that wells #9, 10, and 11 are deep wells drilling to the bottom of the gravel aquifer (approximately 45 feet). The other wells are shallow (13 to 17 feet) and probably only penetrate the top 20 percent of the aquifer.

Tetrachloroethene and trichloroethene are denser than water and would typically sink with time in the aquifer if high concentrations were present. The aeromatic hydrocarbons on the other hand, are lighter than water and would float on the water table. Well #8 shows the highest concentrations of the paint thinner or gasoline substances (xylene, benzene, ethylbenzene). Well #6 which is directly southwest from well #8 also showed low level contamination by ethylbenzene. Since none of the other wells analyzed by PSI or SERCO showed paint thinner substances, it's possible that this contamination is originating from an area not related to the tetrachloroethene source. The trichloroethene tends to coincide with the higher levels of tetrachloroethene and not the aeromatic hydrocarbons.

TABLE 6
WESTPARK GROUNDWATER SAMPLING SUMMARY

Well #	Sample #	Sample Date	<u>Lab</u>	Tetrachloro- ethene (ppb)	Other Volatiles (ppb)	Comment
1	Well 1	10/29	PŠĪ	738	N/A	Assessment I
1	W-1002	11/12	AA	618	N/A	Verification
1	W-1001	11/12	ISL	16000*	N/A	Verification
1	1	11/23	AÁ	1550	N/A	Split
1	1a	11/23	PSI	1228	3 (trichloroethene)	Split
1	1C	11/23	AA	2100	N/A	Sample before purge
1	<u>l</u> d	12/18	<u> </u>	990	N/A	
2	Well-2	10/29	PSI	none	none	Assessment I
<b>3</b>	Well-3	10/29	PSI	none	none	Assessment I
4	4	11/23	AA	119	N/A	
Ś	5	11/23	AA	1400	N/A	
5	5 d	12/18	AA	1310~	N/A	
6	6	11/23	PSI	19	18 (ethylbenzene)	
6	6d	12/31	AA	22 -	n/A	
7	7	11/23	A,A	2520	N/A	
7	7d	12/18	AA	1540	N/A	
8	8	11/23	PSI	77	17 (benzene)	
					38 (ethylbenzene)	
8	8d	12/31	AA	100 -	18 (total xylenes) N/A	
9	9	12/7	AA DOT	1040	N/A 7.5 (trichloroethene)	Split
9	9a	12/7	PSI	660	N/A	Bottom of well
9	9b	12/7	AA	920 1220 ~	N/A	Boccois of well
9 10	9d 10	12/18 12/7	AA	7	N/A	
11	11	12/7	AA	5	_ <u>N</u> /A	
12	12	12/16	AA	1830	N/A	
12	12d	12/18	AA	1510	N/A	
13	13	12/17	AA	1250	N/A	
13	13d	12/18	AA	1140/	N/A	
14	14	1/13	AA	43	N/A	
14	14a	1/13	SERCO	<1	None	
1.5	15	1/13	AA	70	N/A	
15	1.5a	1/13	SERCO	35	none	
16	16	1/13	AA	13	N/A	
16	16a	1/13	SERCO		none TCE	
17	17	1/13	AA	1160	444	
17	17a	1/13	SERCO	2100	4.5 trans 1,2 dichloroe	
					26.0 1,1,2,2 tetrachloro	ethane
					13.0 trichloroethene	

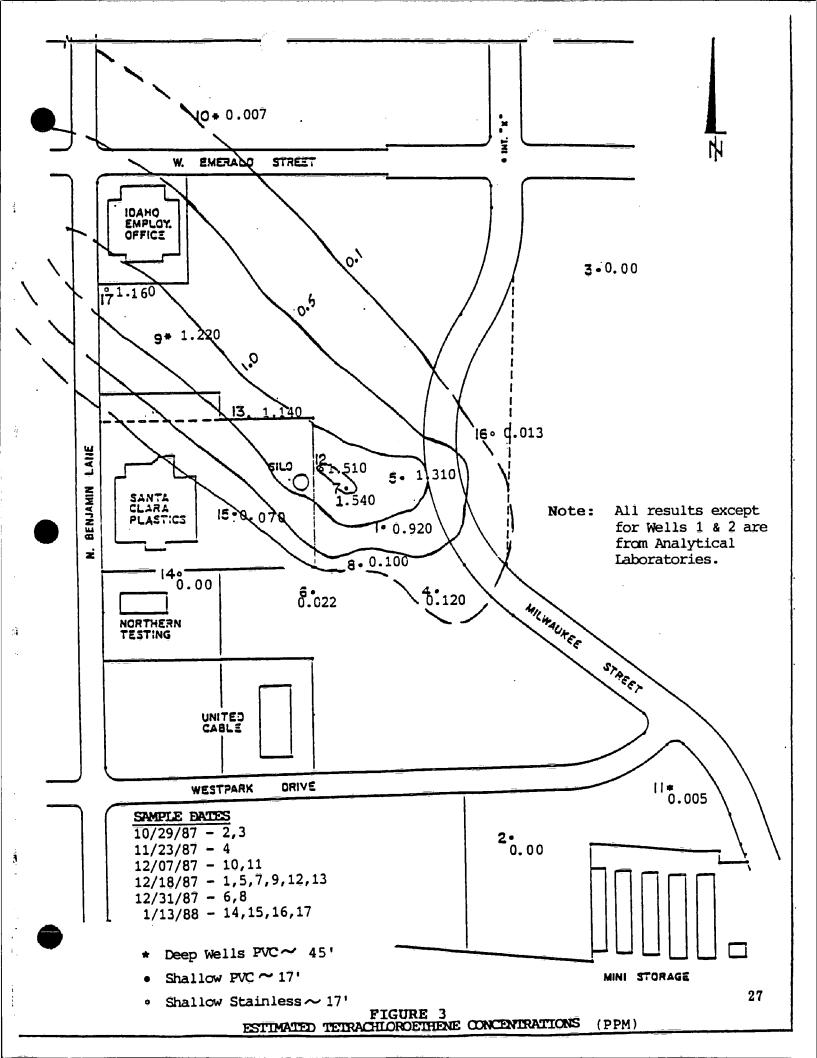
<sup>\*</sup>ISL reported 16000 ppb, however the analysis was done for verification of tetrachloroethene and not quantification. ISL was not certified by EPA for tetrachloroethene at the time of analysis.

Figure 3 "Estimated Tetrachloroethene Concentrations" shows the estimated concentration contours for tetrachloroethene for the period November 1987 through January 13, 1988. Well installation and sampling took place over this time period therefore a specific date cannot be assigned to the plume shown. Figure 3 lists the different sampling dates used for calculating the contour locations. All but two of the laboratory results used are from Analytical Laboratories. AA's values were the most consistent and frequent results available. The zero concentrations shown for Wells 2 and 3 are from the first Westpark assessment samples (10/29/87) which were analyzed by PSI Laboratories (SRM, 1987).

Given the information available to date, the contamination appears to be beyond the Westpark properties to the west and northwest. A 0.010 ppm contour is not shown on Figure 3 because the available wells do not define that contour. It is apparent, however, that a 0.010 ppm contour would extend further to the southeast. The reviewer should not assume that the tetrachloroethene plume ends at the 0.100 ppm contour shown on Figure 3.

Tetrachloroethene and trichloroethene are two of the nine volatile organic compounds that EPA has been studying and preparing to issue drinking water standards. Considerable public comment and agency assessment has taken place in the last five years. The currently used term for a standard is "maximum contaminant level" or MCL. On July 8, 1987, EPA established MCL's for eight of the compounds (USEPA, 1987a). An MCL of .005 mg/liter (5 ppb) was established for trichloroethene but the decision on the MCL for tetrachloroethene was postponed for six months or more. Apparently new toxological data is being reviewed by EPA. The values currently being discussed by EPA for a drinking water MCL (long term) for tetrachloroethene are in the range of 5 ppb to 20 ppb (USEPA, 1980 and personal communication with EPA Region 10).

A variety of factors can influence the rate and direction of contaminant migration in the aquifer. The most obvious is the direction of groundwater flow. A groundwater flow pattern has been estimated from our water level readings in Wells 1-17 on 1/13/88. The groundwater contour map is shown in Appendix C and indicates a general northwest groundwater flow.



There may be local flow patterns in the area that were not characterized by SRM's wells. Industrial and/or residential drainfields could influence the local groundwater flow pattern as would any major pumping in the area.

The Westpark properties are located in an area serviced by two sewer systems as shown in Figure 4. The north-south boundary line demarcating the two sewer systems is located between Steelhead Way and Benjamin Lane. The West Boise Sewer District serves the area east from Benjamin Lane while Boise City Sewer District serves the area west from Steelhead Way.

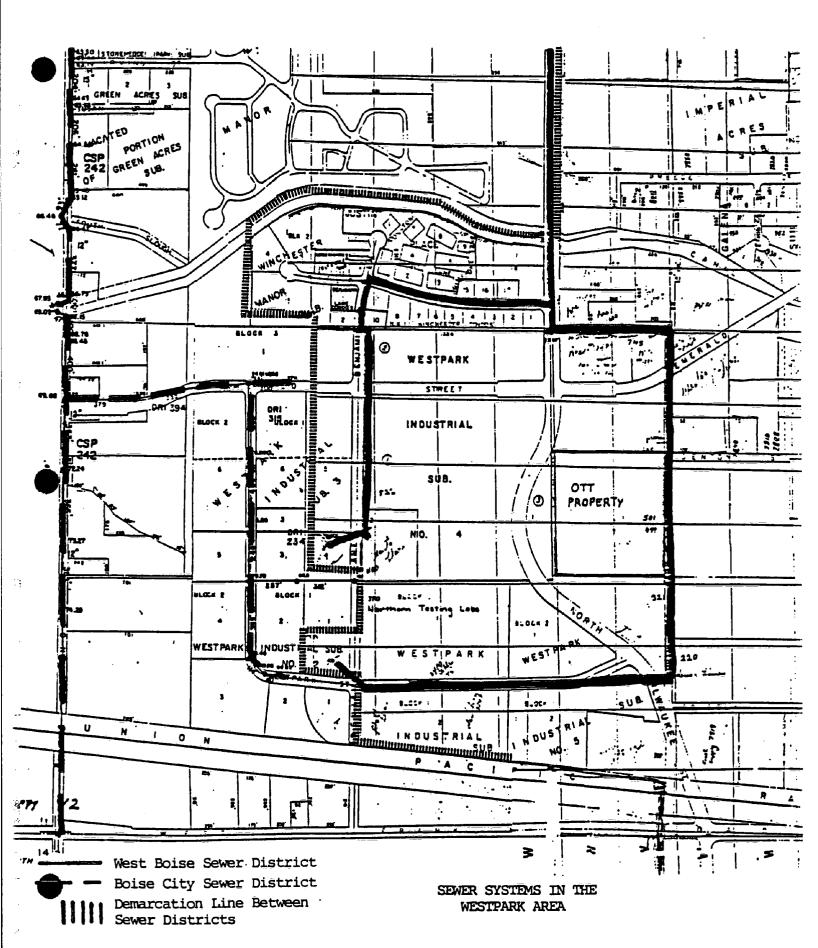
According to Warren Eilers of the Boise Sewer District, the only businesses in this immediate area connected to their sewer systems are a warehouse located at 305-27 Steelhead Way and Preco, Inc., 415 N. Maple Grove Road. Irma McCoy of the West Boise Sewer District stated that Northern Engineering and Testing, Inc., 370 Benjamin Lane, (b) (6)

are the only properties in their service area that are not on the sewer system but rather have their own septic systems. The septic systems may create localized deviations in the northwest flow direction.

# Miscellaneous Sample Analysis

Twelve miscellaneous samples were collected during the Westpark assessment. The sample locations and procedures were discussed earlier in the methodology section. The laboratory results are reported in Appendix H.

Two equipment decontamination blanks were taken during the well drilling and soil sampling. On 11/23/87 clean distilled water was poured over the soil sampling core and collected in two VOA vials. This sample (WP-Decon) was obtained after cleaning the core device before taking soil sample. Laboratory results showed no detectable tetrachloroethene in the equipment contamination sample. A second decontamination blank (WP-decon 2) was collected on 12/16/87 by running distilled water through the hollow



stem auger flights after they were steam cleaned. This sample was analyzed for tetrachloroethene and none was detected (MDL was 5 ppb).

A grab sample of bentonite (SRM-WP-BG-001) was obtained during the installation of Well #7 and analyzed for tetrachloroethene (BG-001). No tetrachloroethene was detected in the bentonite (MDL was 250 ppb).

The water sample WP-SCP-SEW was collected from the West Boise Sewer line at the manhole opening on Benjamin southwest of the State of Idaho Employment Office. The sewer line at this point contains discharge from Santa Clara Plastics and one warehouse building on the west side of Benjamin. The sample was analyzed for tetrachloroethene and none was detected (MDL=5 ppb). The surface water sample collected from the standing ditch water east of Northern Engineering and Testing (WP-1003) did not contain any detectable tetrachloroethene (MDL = .1 ppb).

The sample results of the well development water and contained mud pit water all reflected the level of contamination from their respective sources. For example the well development water and mud pit water for Well #9 was 136 ppb, the well development water from Well #11 was 7 ppb, and the mud pit water from Well #10 was less than 5 ppb.

The debris that was collected on 11/12/87 (samples WP-DB-001 and WP-DB-002) appeared to be a rubber like sack filter that had been abandoned near Well #1. Upon laboratory analysis and discussions with several persons familiar with the material, it was determined that the material was the remains of a weather service balloon (St. Laurant, 1987).

# Review of State Well Log Locations

1

1

If a major plume of tetrachloroethene exists in the Westpark area, the primary health concern would be the public's exposure through drinking water supplies. SRM conducted an investigation to determine the likelihood of groundwater use in the area for domestic or other potable purposes. A

thorough review of the well logs on record (Westpark area) with the Idaho Department of Water Resources was conducted. The complete well log review report is contained in Appendix L. The investigation results indicates that there may be eight shallow private wells within a one-half mile radius of Westpark. The nearest active well appears to be (b) (6)

Most of the residences in the area are served by city water. The city of Boise's well system is under the jurisdiction of the Boise Water Corporation (BWC). According to Dan Brown of BWC, there are no city wells in T3N R1E, Section 12 which encompasses the Westpark site. Sections 1, 2, 11 and 12 which border Section 12, do not contain any city wells either (see General Site Location Map in Appendix A). Boise Water does maintain a 3 million gallon water tank and booster station to the west of Westpark on Steelhead Way. The nearest Boise Water Wells in T3N, R1E are in Sections 14 (NE quad) and 3 (NE quad).

## Governmental Agencies

A number of legal, ethical and institutional issues have arisen subsequent to the finding of tetrachloroethene in the groundwater at and beyond the Westpark properties. The issues are complicated by the fact that the source of the groundwater contamination has not been identified. Section 103(a) of CERCLA appears to require that the owner or operator of the Westpark properties notify the National Response Center (NRC) of knowledge of the past release of a reportable quantity of tetrachloroethene. The reportable quantity of tetrachloroethene is one pound. The NRC is a federal organization centered in Washington, DC and generally does not get involved in the actual assessment of most Idaho spills.

The following governmental agencies are more likely to become involved in any agency assessment of the Westpark site. Additional agency staff

(other than those listed) would probably be assigned to work on the technical issues and review reports.

Idaho Department of Health and Welfare (state) Division of Environment Ken Brooks, Administrator

Water Quality Bureau

- Al Murray, Chief

- Craig Shepard, Boise Field Office

Hazardous Material Bureau

- Cheryl Koshuta, Chief

- Katie Sewell - Acting Manager - RCRA Compliance

- John Moeller, Manager - Technical Assistance (Superfund Program)

- Curt Fransen, Attorney

Idaho Department of Water Resources (state)

Groundwater Protection Section

- John Beal, Manager

Central District Health Department (local)

**Environmental Services** 

- Tom Turco, Chief

U.S. Environmental Protection Agency (federal)

Idaho Operations Office (Boise)

- Lynn McKee, Director

RCRA/Superfund - Hazardous Waste Team

- Steve Provant, Chief

#### SUMMARY AND CONCLUSIONS

On October 23, 1987, Pacific Rim Development Corporation retained the services of the environmental consulting firm Special Resource Management, Inc., to conduct a routine site investigation of 50 plus acres of property in Boise, Idaho. This particular property is located directly west of the new Boise Town Square Mall and is generally referred to as the proposed Westpark Commercial Center. Along with the collection of basic soil engineering data, the site investigation was intended to provide sufficient data to document the presence or absence of any hazardous materials on-site. As part of the investigation, a series of soil and groundwater samples were collected for laboratory analysis. Analysis of one of the well water samples suggested the possible presence of tetrachloroethene at relatively low levels. The contaminated well was resampled and two different laboratories confirmed low levels of tetrachloroethene in the water. This first assessment at Westpark was completed on November 6, 1987.

Further assessment of the contamination was requested and additional monitoring wells were installed on the Westpark properties. Additional soil samples were also taken to help characterize the extent of contamination. Results indicated that tetrachloroethene was present at low levels in the groundwater in the north half of Parcel #1. Meetings with adjoining property owners allowed the installation of additional wells to the west of the Westpark properties to better define the plume of contamination. to-date indicate that tetrachloroethene is present in a narrow plume orientated northwest across the north half of Parcel 1. The groundwater flow within Parcel 1 has been determined to be northwest. The origin or source of contamination has not been identified. The highest concentrations in the center of the plume range from 1,000 ppb to 2,500 ppb. Plume concentrations drop off rapidly perpendicular to the northwest flow of groundwater (i.e., southwest and northeast of the plume centerline). Low concentrations (3 to 13 ppb) of trichloroethene have been observed in the monitoring wells that have the highest concentrations of tetrachloroethene (1,000 ppb or Trichloroethene is one of the primary breakdown products of tetrachloroethene (reductive dehalogenation).

Tetrachloroethene has been identified as a human carcinogen. At the present time a drinking water standard has not been established by the Federal EPA or the State of Idaho. The Federal EPA is currently discussing establishing a drinking water standard for tetrachloroethene somewhere within the range of 5 to 20 ppb. A federal drinking water standard for trichloroethene was recently (July 8, 1987) established by EPA at a concentration of 5 ppb. The State of Idaho has proposed groundwater protection standards that call for no detectable tetrachloroethene in groundwater which might be used for domestic water supplies. In areas already exceeding the recommended standard, the background concentration is applicable to new facilities.

Once it became apparent that groundwater contamination existed in the Westpark area, a concurrent investigation was conducted to examine the likelihood of groundwater use in that vicinity for domestic or other potable purposes. Well logs on record with the Idaho Department of Water Resources within T3N; R1E; Sections 1, 2, 11, 12, 13, and 14 were reviewed. Department's file of well logs is the most complete record of well locations available. Some wells, however, are not filed with the Department. park lies within Section 12. Within a 1 mile radius of Westpark there are approximately 79 wells on record with the State that have general locations indicated on the well log. Of the 79, 23 are equal to or less than 60 feet in The well log review indicated that approximately 25 wells may be located within a 1/2 mile radius of Westpark. Eleven of the 25 wells were equal to or less than 60 feet deep. It was found through an informal survey that approximately 20% of the well owners in the area had converted to or connected to the Boise public drinking water system. If the conversion factor is applied to the number of shallow wells in the area, it could be assumed that eight wells equal to or less than 60 feet within the 1/2 mile radius could be drawing water from the shallow aquifer. Some of these wells are, of course, upgradient of the known plume area and some are possibly abandoned (old farm houses no longer in use). No wells were observed to be in use within the defined tetrachloroethene plume and it appears that no wells are in use immediately downgradient (1/4 mile) of the plume.

Aquifer test data, water level information and estimated dispersivities were used in a model published by Kent and others (1985), in an attempt to quantify the age and extent of the contamination. Dispersivities for sediments such as the terrace gravels found at this site would be expected to range from 0.3 ft. to 2 ft. Typically when trying to fit sparse data to a model the dispersivities are increased by one or two orders of magnitude. In this case, the best fit was obtained by increasing the estimated values by a factor of about 20. A fairly good fit was obtained for the concentrations found in wells 9 and 17 for a spill of two drums occurring approximately one year prior to sampling. Longer and shorter time periods with varying quantities were tried without success. Based on the concentrations observed to date on Westpark properties, approximately 40 to 50 gallons of tetrachloroethene is in the groundwater at present. Allowing for volatilization and adsorption on soil, a reasonable estimate of the amount originally spilled is probably about 2 drums (110 gallons).

Extensive surface soil sampling (0 to 6 inches) in the area of Well 1 was completed on 11/23/87. Two surface samples showed trace concentrations of tetrachloroethene (S-11 and S-7). These samples were over 150 feet apart and had several samples located between then that showed no tetrachloroethene. Approximately 14 grab and grab composite soil samples were taken in areas of suspected contamination. Six of the grab samples were taken at depth (1.5 to 5 ft.). The grab sample taken in the bottom of the old farm silo was the only grab sample containing any tetrachloroethene (S-24a, 28 ppb) and it contained only a trace. The low levels of tetrachloroethene found in the soil samples do not fit a well defined pattern. It's possible that these low soil values may be related to vapors moving through the soil from the contaminated water or from the soil pore spaces when the water table drops in the winter.

Other compounds found in the Westpark soils during the second assessment include: dichloromethane; ethyl benzene; and 1,2-dichloroethane. No real pattern existed for the samples containing these contaminates. The concentrations found were relatively low. Dichloromethane is a common

laboratory solvent but generally any laboratory contamination is an order of magnitude lower than the concentrations found at Westpark. Both of the samples taken east of Northern Engineering and Testing which were run for all the VOC's tested positive for dichloromethane. A reportable quantity (greater than 2 ppb) of dichloromethane has not been found in any of the monitoring wells.

Given the concentrations of tetrachloroethene observed in the groundwater in the northwest corner of the property, its fairly certain that the plume extends beyond the Westpark and Santa Clara Plastics properties. Several plausible scenarios exist for how the groundwater at Westpark became contaminated, but the most realistic case at this point in time, given the available information, is that several drums of tetrachloroethene were dumped on or near Parcel 1. The dumping probably occurred one to two years prior to sampling. The concentrations of tetrachloroethene in the Westpark groundwater could either increase or decrease with time depending on when and how much tetrachloroethene was actually spilled.

The impervious hardpan or calachie which underlies most of the Westpark soils (at about 4 to 5 feet) could influence and/or distort where a spilled chemical would enter the groundwater. Since the hardpan is impervious, a chemical would seep through the upper soils and pool on the calachie until it found a fracture it could leach through. It's possible that the spill site could be 100's of feet from the worst contaminated groundwater. In addition, it's possible the current plume may have migrated to Westpark from a spill site upgradient.

With future development proposed for Westpark, several factors should be addressed at a minimum. First, a restriction on any new shallow drinking water wells in the area of contamination should be implemented. Second, the potential exposure to construction workers at Westpark should be addressed. If a "hot" spot or high concentration of tetrachloroethene exists in soil on Parcel 1, excavation work may result in workers being exposed to unacceptable levels of contamination. Third, an agreement with the applicable government agencies needs to be reached in terms of what

concentrations of tetrachloroethene are acceptable in the groundwater under a paved commercial development. There are several alternatives that could be used to minimize the spread of tetrachlorethene and reduce the potential for any exposure to the public and on-site workers.

The Westpark Partnership has requested that SRM prepare a remediation plan for the tetrachloroethene contamination in the groundwater. Remediation of the groundwater under the proposed development will probably require reduction of the contaminant concentration from the current value to as near 5 ppb as possible. An actual target level for any clean-up action would normally be determined by the state regulatory agency or EPA.

The following alternatives will be assessed in terms of possible future action:

- 1. No action/monitoring only
- 2. Pumping with offsite disposal
  - a. no treatment of disposed water
  - b. pre-treatment of disposed water
- 3. Pumping with onsite treatment and reinjection of water
- 4. Dilution by injection of clean water

Within the above overall alternatives for remediation, there exist several proven alternative treatment methods for removal of the contaminants from water. These include, but are not limited to, the following:

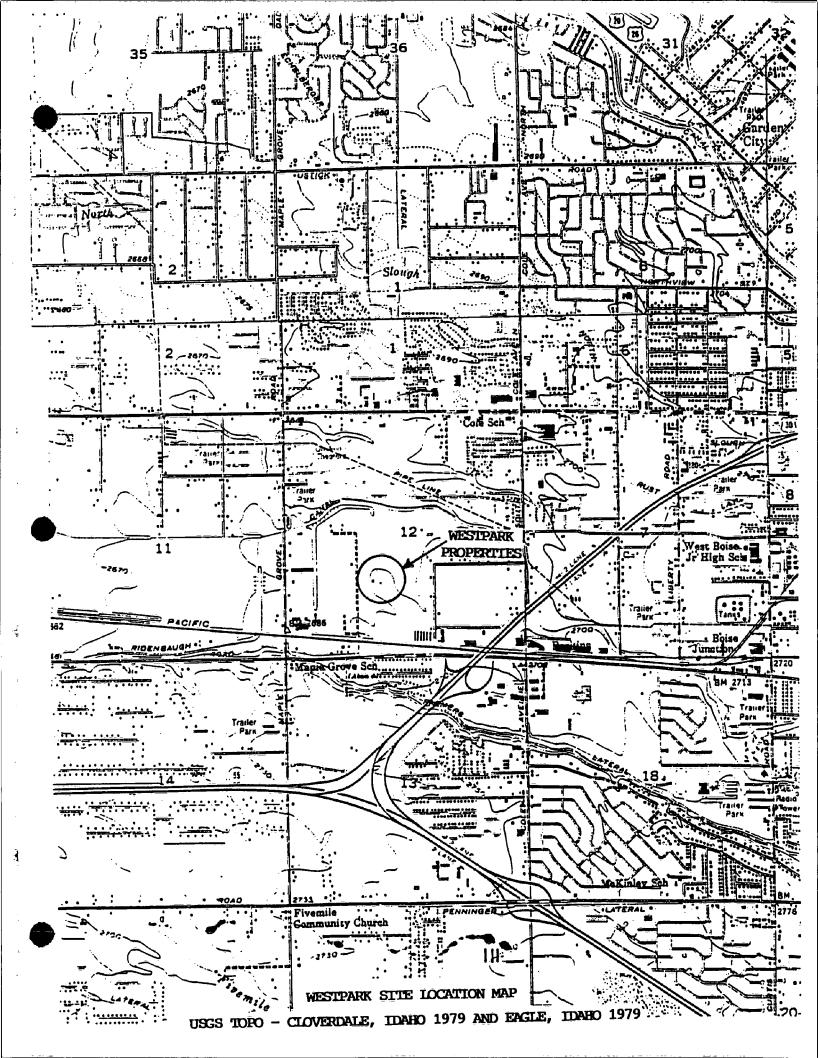
- 1. Carbon Adsorption Only
- 2. Air Stripping Only
- 3. Air Stripping, followed by carbon polishing

The most cost effective treatment method can be selected based on water chemistry, pumping rates projected, contaminant concentration, disposal costs for carbon, and power costs.

Historical construction and operation costs for the various alternatives will be modified to account for the specific flows, concentrations, and site related factors (such as power costs and water disposal costs) to determine the probable least-cost alternative for groundwater remediation specific to the site.

Since most of the alternatives require pumping, SRM shall collect additional aquifer test data for final design of the pumping system. Available data from previous short term tests (under one hour) will be used to design an aquifer test program to obtain additional data without impacting the contamination plume. Additional testing will be longer duration (minimum four hours) which will provide additional data points and better definition of aquifer properties. Information from aquifer testing will be used to determine a pumping rate and well pattern which will maintain sufficient drawdown to induce flow of contaminated water to the wells. This pumping rate will be the final design treatment rate for the alternatives.

Based on the least-cost alternative, a final design shall be developed for the remediation system. This will include site preparation, wells and pumps, support structures (if required), equipment, and utilities. It is estimated that a fully designed and installed remediation system treating 150 GPM will cost on the order of \$60,000. The chosen alternative will likely consist of proven technology, so little or no subscale testing will be required, except, perhaps some bench tests of activated carbon contaminant loading capacity.



#### **BIBLIOGRAPHY**

#### for

#### Westpark Commercial Center Environmental Assessment I an II

- American Conference of Governmental Industrial Hygienists, 1985. Threshold limit values and biological exposure indices for 1985-86.
- Brower, C., 1987. Monitoring surface soil gas for delineating groundwater contamination by petroleum. Proceedings of the National Water Well Conference on Northwestern Groundwater Issues. National Water Well Association, Portland, Oregon, pp. 365-380.
- Cannedy, J.K., 1986. Hydrocarbon recovery in soil and groundwater environments. Proceedings of the 22nd Symposium on Engineering Geology and Soils Engineering. Idaho Department of Transportation, Boise, Idaho. 11 pp.
- Cline, P.V. and D.R. Viste, 1984. Migration and Degradation Patterns of Volatile Organic Compounds. Proceedings of the 5th National Conference on Management of Uncontrolled Hazardous Waste Sites. Washington, D.C., November 7-9, 1984.
- Dion, N.P., 1972. Some effects of land-use changes on the shallow ground-water systems in the Boise-Nampa area, Idaho. U.S. Geological Survey Water Information Bulletin 26. 47 pp. and plates.
- Idaho Department of Health and Welfare, 1987. Idaho Department of Health and Welfare Rules and Regulations, Title I, Chapter 10; "Proposed Groundwater Quality Protection Standards". Docket Number 0110-8700. Division of Management Services, Boise, Idaho.
- Kent, D.C., W.A. Pettyjohn, T.A. Pricket. 1985. Analytical Methods for the Prediction of Leachate Plume Migration. Ground Water Monitoring Review, v. 5, no. 2, pp. 46-59.
- Morrison-Knudsen Engineers, 1985. Draft site characterization report for the Boise industrial complex, Boise, Idaho. Available from the Idaho Division of Environment, Boise, Idaho.
- Special Resource Management, Inc., 1987. Environmental Assessment for the Proposed Westpark Commercial Center, Boise, Idaho. Prepared for Pacific Rim Development Corp., Walnut Creek, CA. November 6, 1987.
- St. Laurant, Bob, 1987. Personal Communication. Meterologist. U.S. Weather Service, Boise, Idaho.
- United States Department of Agriculture, Soil Conservation Service, 1980. Soil Survey of Ada County Area, Idaho. Publication of the National Cooperative Soil Survey.

- United States Environmental Protection Agency, 1980. SNARL for Tetrachloroethylene. Office of Drinking Water. Washington, D.C. February 1980.
- United States Environmental Protection Agency, 1984. Intermedia Priority Pollutant Guidance Documents. Office of Toxic Substances. Revised Edition, October 1984.
- United States Environmental Protection Agency, 1986. RCRA Ground-Water Monitoring Technical Enforcement Guidance Document. Office of Solid Waste and Emergency Response. OSWER-9950.1. Washington, D.C. September 1986.
- United States Environmental Protection Agency, 1987a. National Primary Drinking Water Regulations Synthetic Organic Chemicals; Monitoring for Unregulated Contaminants; Final Rule. Federal Register. July 8, 1987.
- United States Environmental Protection Agency, 1987b. Alternate Concentration Limit Guidance Part 1. ACL Policy and Information Requirements. EPA/530-SW-87-017. Office of Solid Waste, Waste Management Division, Washington, D.C. July, 1987.

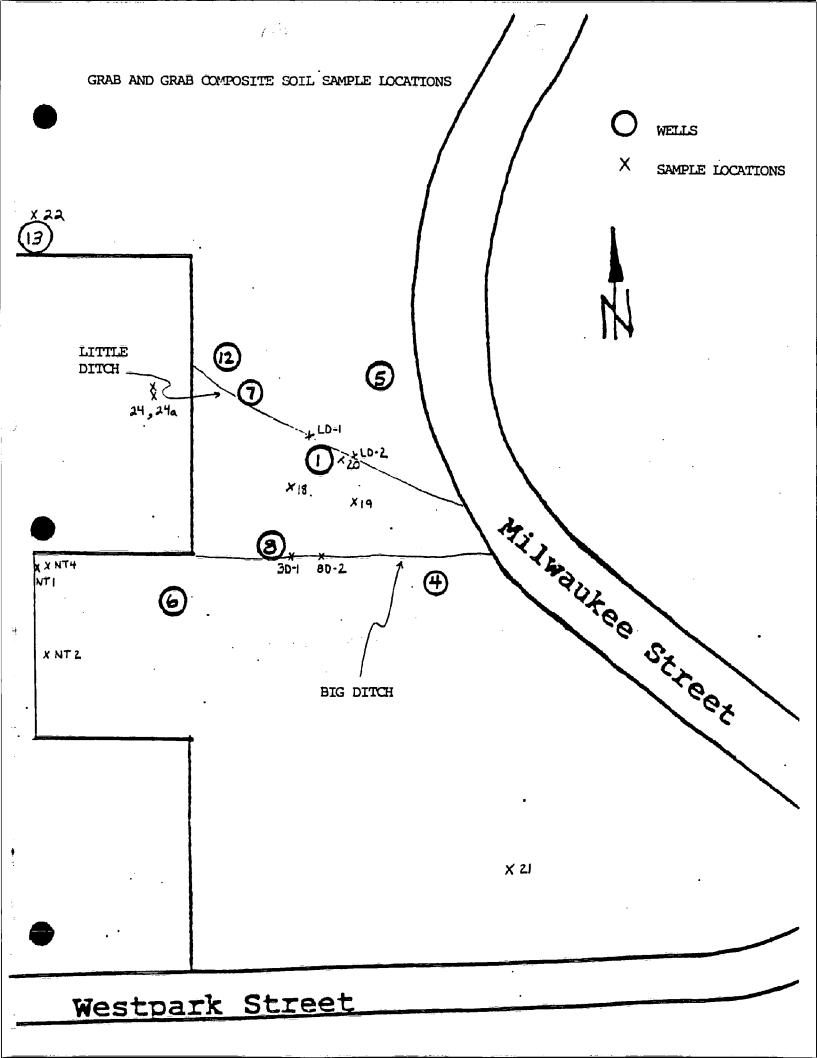
### LIST OF APPENDICES

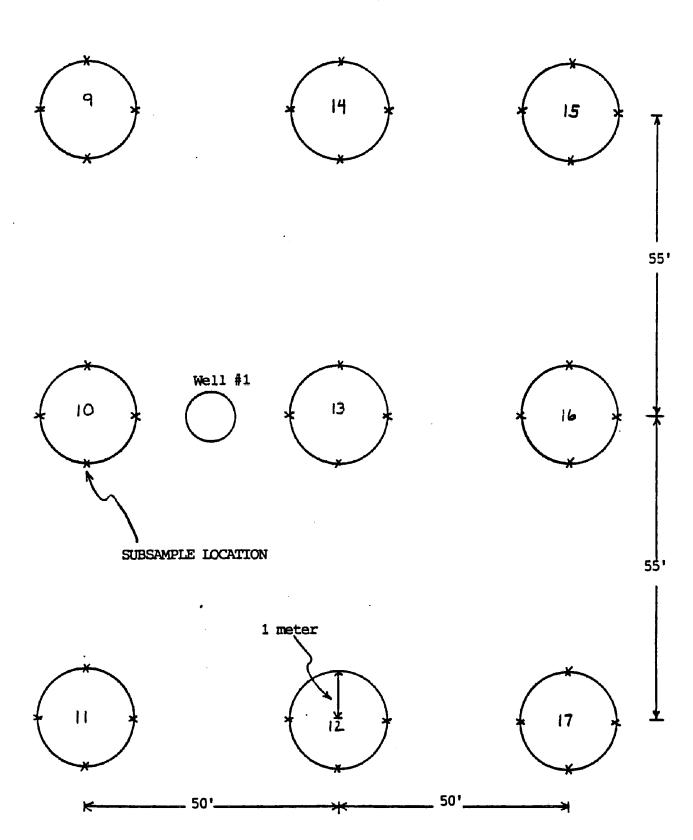
APPENDIX	В	Monitoring Well Locations
APPENDIX	С	Groundwater Level Contours
APPENDIX	ם	Soil Sample Laboratory Results
APPENDIX	E	Groundwater Sample Laboratory Results
APPENDIX	F	Miscellaneous Sample Results
APPENDIX	G	Sample Chain of Custody Records
APPENDIX	Н	Sample Collection Summary
APPENDIX	I	Photograph Documentation
APPENDIX	J	Monitoring Well Logs
APPENDIX	к	Idaho Department of Water Resources - Well Drilling Permits
APPENDIX	L	Well Log Review
APPENDIX	M	Survey Locations and Elevations for Monitoring Wells 1 through 17

APPENDIX A Site Map Soil Sample Locations

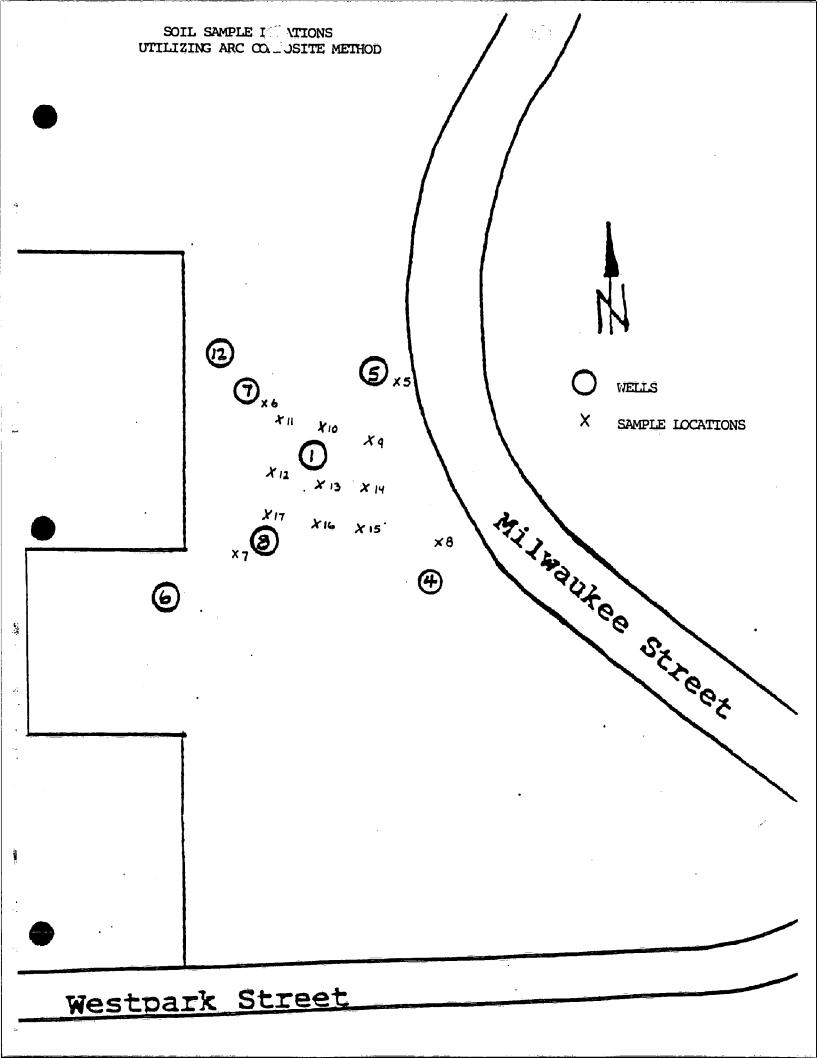
# APPENDIX A

SOIL SAMPLE LOCATIONS



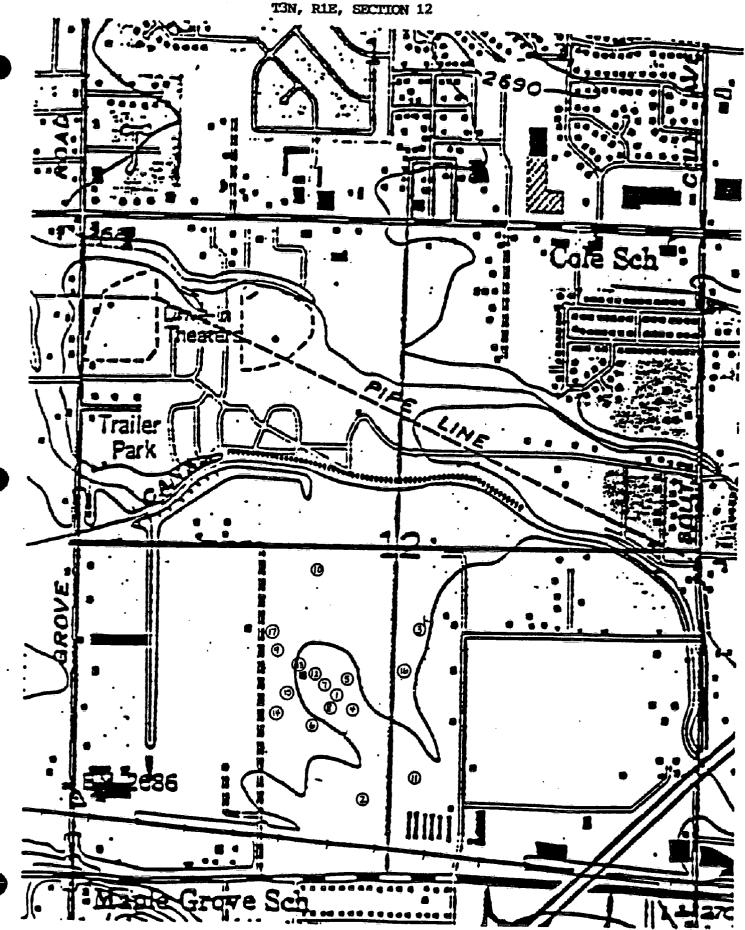


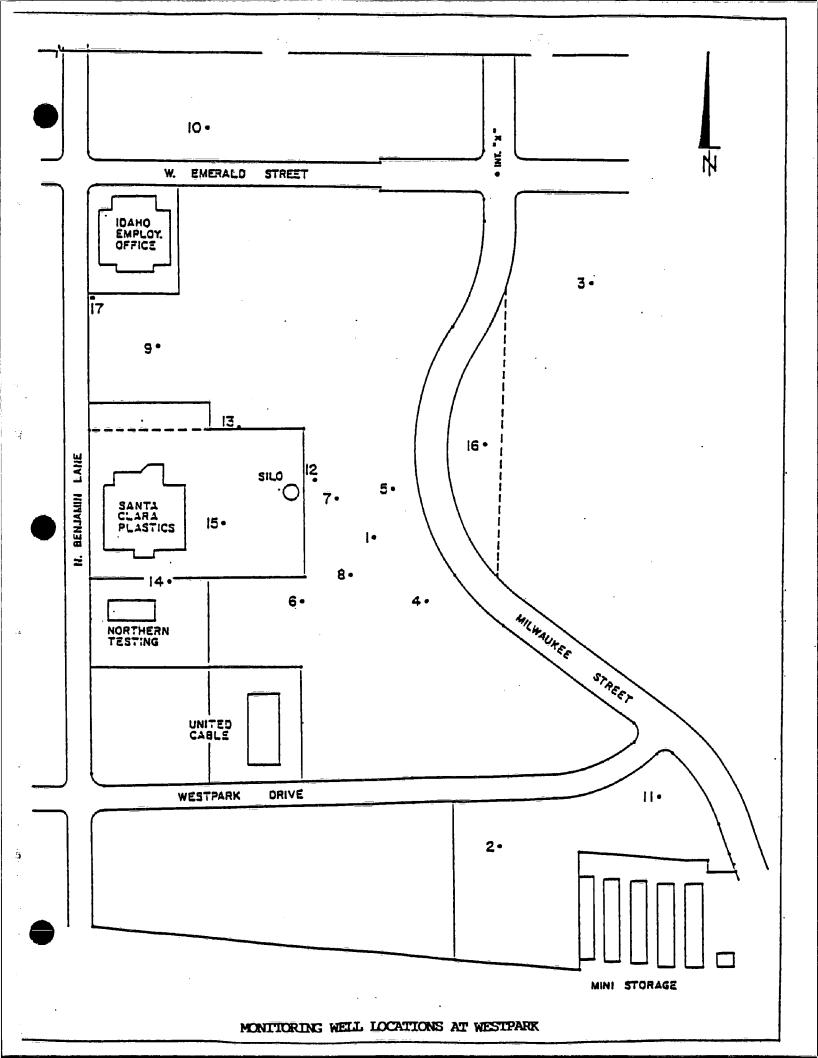
Soil Sample Locations Utilizing the Arc Composite Method



# APPENDIX B

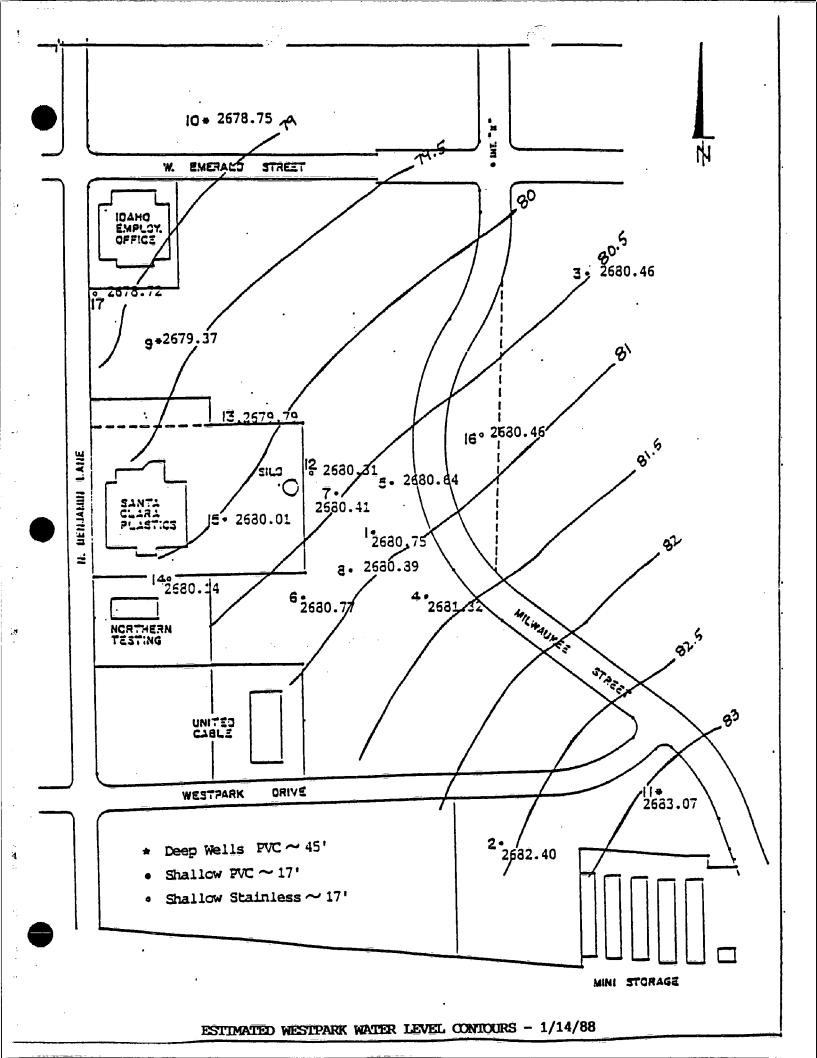
MONITORING WELL LOCATIONS





# APPENDIX C

**GROUNDWATER LEVEL CONTOURS** 



# APPENDIX D

SOIL SAMPLE RESULTS

## ANAL: FICAL LABORATO RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT

SAMPLE NUMBER - 8582

TIME OF COLLECTION -: 1:59 PM 200 NORTH 4TH ST - SUITE #10 DATE RECEIVED ----: 11/24/87 BOISE , ID 83702 DATE REPORTED ----: 12/02/87 SUBMITTED BY -: SOURCE --: SRM-WP-S #6 RESULTS IN ORGANISMS/100al RESULTS IN MG/1(PPM) RESULTS IN URGANISMS/100el TOTAL COLIFORM, MPN ----: FECAL COLIFORM BACTERIA -: BIOCHEHICAL OXYGEN ----: FECAL COLIFORM, MPN ----: FECAL STREP BACTERIA ---: CHEMICAL OXYGEN DEMAND -: PSEUDOMONAS ----: TOTAL COLIFORM BACTERIA -: RESIDUE NONFILTERABLE ---: STAPHILOCOCCUS / gram ---: OIL & GREASE ----: RESULTS IN MG/L (PPM) UNLESS NOTED PHOSPHATE TOTAL ---: ACIDITY -----: CYANIDE WEAK ACID DIS ---: RADIUM GA-GB ----: E P TOXICITY ----: ALKALINITY ----: RESIDUE VOLATILE ---: FLUORIDE DISTILLED ----: AMMONIA DIRECT ----: FLUORICE DIRECT ----: RESIDUE TOTAL ----: AMMONIA DISTILLED ----: HERBICIDES ----RESIDUE TOTAL FILTERABLE-: BICARBONATE ---: BURON ----HARDNESS ----SETTLEABLE MATTER ----: RUMICE ----NITRATE N ----:
NITRITE N ---: STD PLATE COUNT ----: SUFATE ----CARBON DIOXIDE ----: NITROGEN ORGANIC ----: CARBONATE ---: SURFACTANT -----CHLORIDE ----: NITROGEN TOTAL KJELDAHL -: TANNIN & LIGNIN ----: CHLORINE RESIDUAL ----: OXYGEN DISSOLVED ----: PESTICIDES ---: TEMPERATURE ----: COLOR ----: CONDUCTIVITY -----TOTAL ORGANIC CAPBON ---: PHENOLS ---CORRUSTVITY ----TRIHALOMETHANE ---: pH (S.U.) -----TURBIDITY (N.T.U.) ----: CYANIDE FREE ----: PHUSPHATE ORTHO ---CYANICE TOTAL ---: SELĒNIUH -----ALUMINUM -----: SILICA ----ext) -----ANTIHONY ----: STLICON ----ARSENIC ----LEAD ----SILVER ---: BARIUM ----: MAGNESIUM ---:: BERYLLIUM ----: THALLIUM ----: MANGAVESE ---: CADHIUM ----: TIN -----MERCURY ----: CALCIUM ----: CHRCHIUM ----MOLTBEENUM ----IITANIUM ----: VANADIUM ----: NICKEL ----HEKAVALENT CHROMIUM ----: ZINC ----POTASSIUM ----:

COMMENTS: TETRACHLOROETHYLENE = (0.250

SPECIAL RESOURCE MANAGEMENT

Michael D. HOORE

DATE OF COLLECTION -: 11/23/87

## ANALYTICAL LABORATORIES, INC.

#### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8583

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE, ID 83702 DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: 2:14 PM DATE RECEIVED ----: 11/24/87 DATE REPORTED ----: 12/02/87

SUBMITTED BY -:

SOURCE --: SRM-WP-S #7

RESULTS IN MG/1(PPM)	RESULTS IN ORGANISMS/100ml	results in urganishs/100ml
BIRCHEHICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, MPN:
CHENICAL OXYGEN DENAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, NPN:
RESIDUE HONFILTERABLE -:	TOTAL COLIFORN BACTERIA -:	PSEUDOHOHAS:
OIL & GREASE:		STAPHYLOCOCCUS / gram:
RESULTS IN MG/L (PPM) UNLESS NOTED		
ACIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY ———:	E P TOXICITY:	RADIUM GA-G8:
AMMONIA DIRECT:	FLUORIDE DISTILLED:	· RESIDUE VOLATILE:
APPONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL:
BICARBONATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
BORON	HARDNESS:	SETTLEABLE HATTER:
ROMIDE:	HITRATÉ N:	STD PLATE COUNT:
CARRON DIOXIDE:	HITRITE N:	SULFATE:
CARBUNATE:	HITROGEN ORGANIC:	SULFIDE:
CALGRIDE:	NITRUGEN TOTAL KJELDAHL -:	SURFACTANT:
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	tannin & lignin:
COLUR:	PC8:	TEMPERATURE:
CONDUCTIVITY:	PESTICIDES:	total Organic Careon:
CORROSIVITY:	PHENOLS:	TRIHALOMETHANE:
CYANIDE FREE:	pH (S.U.):	TURBIDITY (H.T.U.) =====:
CYANIDE TOTAL -:	PHOSPHATE ORTHO:	
14 4 10 27 10 10 10 10 10 10 10 10 10 10 10 10 10	COPPER:	SELENIUM:
ALUMINUM	GOLD:	SILICA
ANTINONY:	IRON	SILICH
ARSENIC:	LEAD	SILVER
BARIUM	HAGHESIUH	SODIUM
BERYLLIUM:	NANGANESE	THALLIUM
CALINTUM:	MERCURY	TIN
CALCIUM:	HOLYBDENEN:	TITANIUM
CHRONIUM:	NICKEL	YANICH
HEXAVALENT CHROMIUM:		ZINC
COBALT:	POTASSIUM:	CIPC

COMMENTS: TETRACHLOROETHYLENE = 0.255

MICHAEL D. HOURE

## ANAL TICAL LABORATORIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8584

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702

DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: 2:27 PM DATE RECEIVED ----: 11/24/87 DATE REPORTED ----: 12/02/87

SUBMITTED BY -:

SOURCE --: SRM-WP-S #8

RESULTS IN MG/1(PPM)	RESULTS IN URGANISMS/100±i	RESULTS IN ORGANISMS/100m.
BIOCHEHICAL UXYSEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, HPN
CHEHICAL OXYGEN GEHAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, HPN
RESIDUE NONFILTERABLE:	TOTAL COLIFURN BACTERIA -:	PSEUDOHONAS
DIL & GREASE;		STAPHYLOCOCCUS / gram
RESULTS IN HG/L (PPM) UNLESS NOTED		
ACIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL
ALKALINITY:	E P TOXICITY:	RADIUM GA-GB
AMMINIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE
WOONTA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL
ICARBOHATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-
lúriún	HARCHESS:	SETTLEABLE HATTER
PHIDE:	NITRATE N:	STD PLATE COUNT
ARBON DIOXIDE:	NITRITE N: \	SULFATE
ARBONATE:	NITROGEN ORGANIC:	SUFIDE
HLORIDE:	NITROGEN TOTAL KJELDAHL -:	SURFACTANT
HLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANNIN & LIGHIN
OLÙR:	PC8:	TEMPERATURE
ONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
URROSIVITY	PHENOLS:	TRIHALOMETHANE:
YANICÉ FREE:	pH (S.U.):	TURBIDITY (N.T.U.):
YANIDE TOTAL:	PHOSPHATE ORTHO:	
LIMINA	COPPER	SELENIUM '
NTIHONY	60LD	
RSENIC	IRON	STLICA
ARIUH	LEAD	
ERYLLIUM	MAGNESIUM	SILVER:
DHIUN	MANGALESE:	SODIUM:
LCIUM	MERCURY	TIN
ROMIUM	HOLYBOENUM	
EXAVALENT CHROHIUM:	NICKEL	TITANIUM:
CRALT	POTASSIUM	YANADIUH:
JUNE 1	ruiassium:	ZINC:

COMMENTS: TETRACHLOROETHYLENE = (0.250

MICHAEL D. MOORE

## ANAL' TICAL LABORATO RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# . WATER QUALITY REPORT SAMPLE NUMBER - 8585

SPECIA	AL R	ESQU	RCE		MANAGE	MENT	
200 NO	RTH	4TH	ST	_	SUITE	#10	
BOISE	, ID	8370	2			•	

DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: 2:42 PM DATE RECEIVED ----: 11/24/87 DATE REPORTED ---: 12/02/87

SUBMITTED BY -:

7

SOURCE --: SRM-WP-S #9

BIOCHEMICAL OXYGEN: FECAL COLIFORM BACTERIA -: TOTAL COLIFORM, M CHEMICAL OXYGEN DEMAND -: FECAL STREP BACTERIA: FECAL COLIFORM, M RESIDUE NONFILTERABLE: TOTAL COLIFORM BACTERIA -: PSEUDOMONAS OIL & GREASE: STAPHYLOCOCCUS /	PN:
CHÉMICAL OXYGEN DEMAND -: FECAL STREP BACTERIA: FECAL COLIFORM, M RESIDUE NONFILTERABLE: TOTAL COLIFORM BACTERIA: PSEUDOMONAS	PN:
RESIDUE NONFILTERABLE: TOTAL COLIFORM BACTERIA -: PSEUTOMONAS	:
	<del></del>
RESULTS IN MG/L (PPM) UNLESS NOTED	
ACIDITY: CYANIDE WEAK ACID DIS: PHOSPHATE TOTAL -	
ALKALINITY: RADIUM GA-GE	<del></del> :
AMMANIA DIRECT: FLUORIDE DISTILLED: RESIDUE VOLATILE	<del>:</del> :
AMMONIA DISTILLED: FLUORIDE DIRECT: RESIDUE TOTAL	<del></del> :
BICARDONATE: NERBICIDES: RESIDUE TOTAL FIL	
BORDH: HARDNESS: SETTLEABLE MATTER	
ROMIDE STD PLATE COUNT	
CARBON DIOXIDE: SULFATE	<del></del> •
CARBONATE: NITROGEN ORGANIC: SULFIDE	:
CHLORIDE	
CHLURINE RESIDUAL: OXYGEN DISSOLVED: TANNIN & LIGHIN	
COLOR ———————————————————————————————————	
CONDUCTIVITY: PESTICIDES: TOTAL ORGANIC CAR	•
CORROSIVITY : PHENOLS : TRIHALOMETHANE -	•
CYANIDE FREE : TURBIDITY (N.T.U.)	) <del></del> :
CYANIDE TOTAL :: PHOSPHATE ORTHO:	
ALUMINUM :: COPPER: SELENIUM	
ALUMINUM : COPPER : SELENIUM: SILICA	<del>-</del>
ARSENIC : IRON : SILICON	
BARIUH SILVER	
BERYLLIUM	
CADMICM : HANGANESE : THALLIUM	:
CALCIUM: MERCURY: TIN	·
CHROHIUM: TITANIUM: TITANIUM	
HEXAVALENT CHROHIUM: VANADIUM: VANADIUM	
COBALT: POTASSIUM: ZINC	
VUITE . LETV	•

COMMENTS: TETRACHLOROETHYLENE = (0.250

Michel N. Moore

# ANAL TICAL LABORATO MES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT

#### SAMPLE NUMBER - 8586

200 NORTH 4TH ST - SUITE # BOISE, ID 83702		DATE OF COLLECTION -: 11/23/8' TIME OF COLLECTION -: 2:57 PM DATE RECEIVED: 11/24/8
SUBMITTED BY -: SOURCE: SRM-WP-S #10	•	DATE REPORTED: 12/02/8
RESULTS IN HG/1(PPH)	RESULTS IN ORGANISHS/100±1	RESULTS IN URGANISHS/100ml
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERÍA -:	TOTAL COLIFORM, HPN:
CHEHICAL OXYGEN DENAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, HPN:
RESIDUE NONFILTERABLE -:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS
OIL & GREASE:		STAPHYLGCOCCUS / gras:
RESULTS IN HG/L (PPH) UNLESS HOTED		·
ACIDITY	CYANÎTÊ WEAK ACID DIS -:	PHOSPHATE TOTAL:
ALXALINITY —————	E P TOXICITY:	RADIUM GA-GB
AMMONIA DIRECT:	FLUORICE DISTILLED:	RESIDUE VOLATILE
APPICATA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL:
BICARBONATE	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
BORON	HARDNESS:	SETTLEABLE MATTER:
HICE	nitrate n <del>:</del>	STD PLATE COUNT:
CARBON DIOXIDE:	NITRITE N ———	SUFATE:
CARBONATE -:	NITROGEN ORGANIC:	SUFFICE
CHLORICE:	NITROBEN TOTAL KJELDAHL -:	SURFACTANT
CALORINE RESIDUAL:	OXYGEN DISSOLYED:	TANNIN & LIGHIN
COLOR:	PC8:	TEMPERATURE
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS	TRIHALOMETHANE
CYANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL —:	PHOSPHATE ORTHO:	
ALUMINA:	MARIOTE	
ANTIMONY	COPPER	SELENIUN ————:
ARSENIC	GOLD	SILICA:
BARIUH	•	SILICON:
BERYLLIUM	LEAD:	SILVER:
CACHILIN	MAGNESIUM	SODIUM
CALCIUM	MERCURY	THALLIUM:
CHRONIUM	HOLYBGENEM	· III
HEXAVALENT CHRONIUM:	NICKEL	IITANIUM
COBALT	POTASSIUM	YANADIUM:
word:	rui Assiun	ZINC

MÍCHAEL D. HOGRÉ

## ANAL TICAL LABORATO RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT

#### SAMPLE NUMBER - 8588

RESULTS IN ORGANISMS/100al

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE, ID 83702 DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: 3:27 PM DATE RECEIVED ----: 11/24/87 DATE REPORTED ----: 12/02/87

RESILTS IN ORGANISMS/10041

SUBMITTED BY -:

RESULTS IN MG/1(PPM)

SOURCE --: SRM-WP-S #12

nesocis in nativity	VESOCIA IN ANGRATOUS/TOOM!	MEGULIO IN UNGANIONO/10081
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, HPN:
CHEMICAL OXYGEN DEMAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, NPN:
RESIDUE NONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDOMONAS
OIL & GREASE:		STAPHYLOCOCCUS / gram:
RESULTS IN HG/L (PPH) UNLESS NOTED		
ACIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY:	E P TOXICITY:	RADIUM GA-GB:
AMMONIA DIRECT:	FLUORICE DISTILLED:	RESIDUE VOLATILE:
AMMONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL:
BICARBONATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
BURON:	HARDNESS:	SETTLEABLE MATTER:
ROMIDE:	NITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE:	NITRITE N:	SULFATE:
CARBONATE:	NITROGEN ORGANIC:	SULFIDE:
CHLORIDE:	NITROGEN TOTAL KJELDAHL -:	SURFACTANT:
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANNIN & LIGHIN:
XXLÓR:	PC8:	TEMPERATURE:
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS:	TRÍHALOMETHANE:
CYANIDE FREE:	pH (S.U.) <del>:</del> :	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE URTHO:	
********		4
ALUHINUH:	COPPER:	SELENIUM:
NTIHONY:	60LD:	SILICA:
RSENIC:	IRON:	SILICON:
ARIUM	LEAD:	SILYER:
ERYLLIUM:	MAGNESIUM:	SODIUM:
ADMÍUM::	KANGANESE:	THALLIUM:
ALCIUM:	YERCURY	TIN:
HROHIUM:	HOLYEDENUM:	TITANIUM:
EXAVALENT CHROHIUM:	NICKEL:	WILDIAM:
CORALT:	POTASSIUM:	ZINC:

COMMENTS: TETRACHLOROETHYLENE = (0.250

Milneforman

### ANALTTICAL LABORATO RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT SAMPLE NUMBER - 8590

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702

DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: 3:52 PM DATE RECEIVED ----: 11/24/87 DATE REPORTED ----: 12/02/87

SUBMITTED BY -:

SOURCE --: SRM-WP-S #14

RESULTS IN HG/1(PPM)	RESULTS IN ORGANISHS/100ml	RESULTS IN ORGANISMS/100æl
BIOCHENICAL OXYGEN:	FECAL COLIFORM SACTERIA -:	TOTAL COLIFORM, HPN:
CHEHICAL OXYGEN DEMAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, HPN:
RESIDUE NONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS
OIL & GREASE:		STAPHYLOCOCCUS / gram:
RESULTS IN MG/L (PPM) UNLESS HOTED		·
ACIDITY:	CYANIDE HEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY:	E P TOXICITY:	RADIUM GA-CB
AMMANIA DIRECT:	FLUGRIDE DISTILLED:	RESIDUE VOLATILE:
apponia distilled:	FLUORIGE DIRECT:	RESIDUE TOTAL:
BICARBONATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
BORON:	HARDNESS	SETTLEABLE HATTER:
CHIDE	NITRATE N:	STD PLATE COUNT:
MRBON DIOXIDE:	NITRITE N:	SUFATE:
CARBUHATE:	NITROGEN ORGANIC:	SUFIDE:
CHLORICE:	NITROGEN TOTAL KJELDAHL -:	SURFACTANT:
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANNÎN & LÎGNÎN::
XXLGR:	PC8:	TEMPERATURE:
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARSON:
CORRUSIVITY:	PHENOLS ——————:	TRĪHALOMĒTHAME
CYANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
ALUMINUM	COPPER:	SELENIUM:
ANTIHONY:	GOLD:	STLTCA:
ARSENIC:	TRON:	STLÍCON:
BARIUM:	LEAD:	SILVER:
BERYLLIUM:	HAGNESIUM:	\$001UM:
CADHIUN:	MANGANESE:	THALLIUM:
CALCIÚN:	MERCURY:	TIN
HROHIUM:	HOLYBOENUM:	TITANIUM:
HEXAVALENT CHRONIUM:	NICKEL	YANADĪUM:
COBALT:	POTASSIUM:	ZINC:

COMMENTS: TETRACHLOROETHYLENE : (0.250

MICHAEL D. MOORE

### ANAL' TICAL LABORATO MES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8591

SPECIAL RESOURCE MANAGEMENT DATE OF COLLECTION -: 11/23/87 200 NORTH 4TH ST - SUITE #10 TIME OF COLLECTION -: 4:14 PM BOISE , ID 83702 DATE RECEIVED ----: 11/24/87 DATE REPORTED ----: 12/02/87 SUBMITTED BY -: SOURCE --: SRM-WP-S #15 RESULTS IN MG/1(PPM) 1 RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISMS/100ml BIOCHENICAL OXYGEN ----: FECAL COLIFORM BACTERIA -: TOTAL COLIFORM, HPN ---: CHEHICAL OXYGEN DEHAND -: FECAL STREP BACTERIA ---: FECAL COLIFORM, HPN ----: RESIDUE NONFILTERABLE -: TOTAL COLIFORM BACTERIA -: PSEUDOHONAS ---: OIL & GREASE ---: STAPHYLOCOCCUS / gram -: RESULTS IN MG/L (PPH) UNLESS NOTED ACIDITY ----CYANIDE WEAK ACID DIS -: PHOSPHATE TOTAL ---: ALKALIHITY -----E P TOXICITY ----: RADIUH GA-GB ----: AMMONIA DIRECT ---:: FLUORIDE DISTILLED -----RESIDUE VOLATILE ---: APMONIA DISTILLED ---: FLUORIDE DIRECT ----: RESIDUE TOTAL ---: BICARBONATE ---: HERBICIDES ---: RESIDUE TOTAL FILTERABLE-: BURCH -----SETTLEABLE MATTER ---: STD PLATE COUNT ----: NITRATE N ----:
NITRITE N ----: TARBON DIOXIDE ----: CAPBONATE ---:
CHLORIDE ---: NITROGEN ORGANIC -----SURFACTANT -----NITROGEN TOTAL KJELDAHL -: CHLORINE RESIDUAL ----: TANNIN & LIGHTH ----: OXYGEN DISSOLVED ---: TEMPERATURE ----COLÚR ----: CONDUCTIVITY -----: PESTICIDES ----TOTAL ORGANIC CARBON ----: PHENOLS -----CORROSIVITY ----: TRIHALOMETHANE ----: CYANIDE FREE ----: TURBIDITY (N.T.U.) ----: PHOSPHATE ORTHO ----CYANIDE TOTAL ----: ALUMINUM -----: SELENIUM ----: ANTIHONY ----: GOLD -----SILICA ----ARSENIC ----: TRON -----SILICON ----SILVER ----:
SODIUM ----:
THALLIUM ---: BARIUM ----LEAD -----MAGNESIUM ----BERYLLIUM -----CADMIUM -----MANGANESE ----CALCIUM ----HERCURY -----TIN ----HOLYBOENUH ----TITANIUM ----CHROHIUN -----NICKEL VANADIUM -----: HEXAVALENT CHROMIUM ----: ZINC ----POTASSIUM -----

COMMENTS: TETRACHLOROETHYLENE = (0.250

Missel norman

### ANAL TICAL LABORATY RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT . SAMPLE NUMBER - 8592

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702

DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: 4:27 PM DATE RECEIVED ----: 11/24/87 DATE REPORTED ----: 12/02/87

RESULTS IN ORGANISMS/100ml

TOTAL COLIFORM, HPN ----: FECAL COLIFORM, MPN ---: PSEUDOMONAS ----:

SUBMITTED BY -: SOURCE: SRM-WP-S #16	
RESULTS IN HG/1(PPH)	RESULTS IN ORGANISMS/100±1
BIOCHEMICAL OXYGEN: CHEMICAL OXYGEN DEMAND -: RESIDUE NONFILTERABLE: OIL & GREASE	FECAL COLIFORM BACTERIA -: FECAL STREP BACTERIA: TOTAL COLIFORM BACTERIA -:

STAPHYLOCOCCUS / gram ---: RESULTS IN HG/L (PPH) UNLESS HOTED ACIDITY ---: CYANTDE WEAK ACID DIS -: PHOSPHATE TOTAL ---: E P TOXICITY ---: RADIUM GA-GB ----: AMIONIA DIRECT ----: FLUORIDE DISTILLED ----: RESIDUE VOLATILE ---: APPONIA DISTILLED ----: FLUORICE DIRECT ----: RESIGUE TOTAL ----: BICARBONATE ----: HERBICIDES -----RESIDUE TOTAL FILTERABLE -: BORON ----HARDNESS -----SETTLEABLE MATTER ----: NITRATE N ----: DHIDE ----STD PLATE COUNT ----: CARBON DIOXIGE ----: NITRITE N ----: CARBONATE ---: NITROGEN ORGANIC -----SURFACTANT -----NITROGEN TOTAL KJELDAHL -: CHLORINE RESIDUAL ----: OXYGEN DISSOLVED ----: TAMIN & LIGNIN -----COLOR ----TEMPERATURE ----PESTICIDES ----CONDUCTIVITY ----: TOTAL ORGANIC CARBON ---: CORROSIVITY -----PHÉNOLS ---::
pH (S.U.) ---:: TRIHALOMETHANE ---: CYANICE FREE ----: TURBIDITY (N.T.U.) -----: CYANIDE TOTAL ----: PHOSPHATE ORTHO -----ALUHINUM ----: COPPER ----SÉLÉNTUM ----ANTIHONY -----SILICA ----

LEAD -----

NAGNESIUM ----

MANGANESE ----HERCURY ----

NICKEL ----

POTASSIUM ----

HOLYBDEACH ----:

COMMENTS: TETRACHLOROETHYLENE = (0.250

ARSENIC ----

BARIUH -----

HEXAVALENT CHROHIUM ----:

CHROHIUM ----

CALCIUM ----

michel pour

STL COON ----

THALLIUM ----

TITANIUH ----

VANADIUM ----

TIN ----

HICHAEL D. HOORE

# ANALTTICAL LABORATORIES, INC.

## 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8593

SPECIAL RESOURCE MANAGEME 200 NORTH 4TH ST - SUITE #10 BOISE, ID 83702		DATE OF COLLECTION -: 11/23/8' TIME OF COLLECTION -: 4:39 PM DATE RECEIVED: 11/24/8
SUBMITTED BY -: SOURCE: SRM-WP-S #17	-	DATE REPORTED: 12/02/8
RESULTS IN MG/1(PPM)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISMS/100ml
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, HPM:
CHEMICAL OXYGEN DEMAND:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN:
RESIDUE NONFILTERABLE:	TOTAL COLIFORN BACTERIA -:	PSEUDOHONAS
OIL & GREASE:	<u></u>	STAPHYLOCOCCUS / graa:
RESULTS IN MG/L (PPM) UNLESS NOTED	\	· · · · · · · · · · · · · · · · · · ·
ACIDITY:	CYANIDE HEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY:	E P TOXICITY:	RADIUM GA-GB
AMMONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
AMHONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL
BICARBONATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
BORON:	HARDNESS	SETTLEABLE HATTER
ROMIDÉ:	HITRATE N:	STD PLATE COUNT
CARBON DIOXIDE:	NITRITE N:	SULFATE
CAREGNATE:	NITROGEN ORGANIC:	SULFIDE
CHLORIDE	NITROGEN TOTAL KJELDAHL -:	SURFACTANT
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANNIN & LIGNIN
COLUR:	PC8:	TEMPERATURE
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS:	TRIHALOMETHANE
CYANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.)
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
AL INSTANCE.	444APh	
ALUTINATO	COPPER:	SELENIUM:
ANTIHONY:	GOLD:	SILICA
and the same of th		STLICON
BARIUM:: BERYLLIUM::	LEAD:	SILVER:
CADHIUN	MAGNESTUM:	SODIUM
CALCIUM	HANGANESE	THALLIUM:
CHROHIUM		TIN:
•	MOLYBDENON:	TITANIUM:
HEXAVALENT CHRONIUM: COBALT:	NICKEL	YANADIUM:
WORL!	POTASSIUM:	21NC

COMMENTS: TETRACHLOROETHYLENE = (0.250

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HICHAEL D. HOORE

# ANALY 'ICAL LABORATC IES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT

#### SAMPLE NUMBER - 8600

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE, ID 83702		DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: DATE RECEIVED: 11/24/87 DATE REPORTED: 12/02/8'
SUBMITTED BY -: SOURCE: SRM-WP-S-18-1.5		
RESULTS IN HG/1(PPH)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISMS/100ml
BIOCHENICAL OXYGEN:	FECAL COLIFURM BACTERIA -:	TOTAL COLIFORM, MPN:
CHEMICAL OXYGEN DEMAND:	FECAL STREP BACTERIA:	FECAL COLIFORM, HPN:
RESIDUE NONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDOMONAS:
OIL & GREASE:		STAPHYLOCUCCUS / gram —:
RESULTS IN MG/L (PPM) UNLESS NOTED		
ACIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY:	E P TOXICITY:	RADIUM GA-GB
AMMONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
AMMONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL:
BICARBONATÉ:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
ANRON	HARDNESS	SETTLEABLE MATTER:
MICE:	HITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE:	NITRITE N:	SUFATE
CARBONATE: CALORIDE:	HITROGEN ORGANIC:	SUFICE:
CHLORIDE:	nitrugen total kjeldahl -:	SURFACTANT:
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANNIN & LIGHIN
COLOR:	PC8:	TEMPERATURE:
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORRUSIVITY:	PHENOLS:	TRIHALONE THANE
CYANIDE FREE:	рH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
A) PARTERA	COPPER:	SELĒNIUM:
ALUTIMA	60LD:	SILICA:
ANTIYONY:	IRON	SILICON:
ARSENIC:	LEAD:	SILVER:
BARIUM	HAGNESIUM	SODIUM:
BERYLLIUM	MANGANESE	THALLIUN:
CALCIUM:	HERCURY	TIN ————————————————————————————————————
CHROHIUM:	MOLYBDENUM	TITANIUM
HEXAVALENT CHRONIUM:	NICKEL	VANADIAN
CORALT	POTASSIUM:	ZINC
LABOR I	. U I FIONA DI I	·

COBALT ---

COMMENTS: TETRACHLOROETHYLENE = (0.250

HICHAEL D. HOORE

## ANAL TICAL LABORATCRIES, INC.

#### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT SAMPLE NUMBER - 8601

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702

DATE OF COLLECTION -: 11/23/87

TIME OF COLLECTION -:

DATE RECEIVED ----: 11/24/87 DATE REPORTED ----: 12/02/87

SUBMITTED BY -:

SOURCE --: SRM-WP-S-19-1.5

RESULTS IN MG/1(PPM)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISMS/100m
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, MPN
CHEMICAL OXYGEN DEMAND:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN
RESIDUE NONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDGHONAS
OTL & GREASE:		STAPHYLOCOCCUS / gram
RESULTS IN HG/L (PPH) UNLESS NOTED		* <del>* * * * * * * * * * * * * * * * * * </del>
ACIDITY:	CYANIDE MEAK ACID DIS:	PHOSPHATE TOTAL
ALKALINITY:	E P TOXICITY:	RADIUH GA-GB
AMMONTA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE
MAKINIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL
IICARBONATE:	HERDICIDES:	RESIDUE TOTAL FILTERABLE-
ORON:	HAGONESS	SETTLEABLE MATTER
CHICE:	NITRATE N:	STD PLATE COUNT
ARBON DIOXIDE:	NITRITE N:	SULFATE
CARBONATE:	NITROGEN ORGANIC	SUFICE
HLORIDE:	NITROGEN TOTAL KJELDAHL -:	SURFACTANT
HLORINE RESIDUAL:	OXYSEN DISSULVED:	TANEN & LIGHTH
COLOR	PO3:	TEMPERATURE
CONDUCTIVITY;	PESTICIDES:	TOTAL ORGANIC CAREON
ORROSIVITY:	PHENGLS	TRIHALOHETHANE
YANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.)
YANIDE TOTAL:	PHOSPHATE ORTHO:	
, i i i i i i i i i i i i i i i i i i i	A400FD	
LUNIAN:	COPPER:	SELENIUM
MTIHOMY:	GX.D:	SILICA:
RSENIC:	IRON:	SILICON
ARIUH:	LEAD:	SILVER:
ERYLLIUM:	MAGNESTUM	SODIUM
AOMIUM:	HANGANESE:	THALLIUM:
ALCIUM:	HERCURY :	TIN
HROHIUN:	MOLYEGENUM:	
EXAVALENT CHROMIUM:	HICKEL:	VANADIÚM:
CBALT:	POTASSIUM:	ZINC:

COMMENTS: TETRACHLOROETHYLENE = (0.250

## ANAL' TICAL LABORATO RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8602

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702

DATE OF COLLECTION -: 11/24/87 TIME OF COLLECTION -: 10:27 AM DATE RECEIVED ----: 11/24/87 DATE REPORTED ----: 12/02/87

SUBMITTED BY -:

SOURCE --: SRM-WP-S-20-1.5

RESULTS IN NG/1(PPH)	RESULTS IN GREANISMS/100ml	RESULTS IN ORGANISMS/100@1
BIOCHENICAL OXYGÉN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, NPN:
CHENICAL OXYGEN DEHAND:	FECAL STREP BACTERIA:	FECAL COLIFORM, HPN:
ESIDUE NONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS:
OIL & GREASE:		STAPHYLOCOCCUS / gras:
RESULTS IN MG/L (PPM) UNLESS NOTED		
CIDITY:	CYANIDE NEAK ACID DIS -:	PHOSPHATE TOTAL:
LKALINITY:	E P TOXICITY:	RADIUM GA-GB:
VACNIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
VPICHIA DISTILLED:	FLUORICE DIRECT:	RESIDUE TOTAL:
BICARBONATE:	HERBICICES:	RESIDUE TOTAL FILTERABLE-:
BORON:	HARDHESS	SETTLEABLE HATTER:
ROMIDE:	NITRATE N:	STD PLATÉ COUNT:
CARBON DIOXIDE:	NITRITE N:	SULFATE:
CARBONATE:	NITROGEN ORGANIC:	SULFIDE:
CHLORIDE	HITROGEN TOTAL KJELDAHL -:	SURFACTANT:
CHLURINE RESIDUAL	OXYGEN DISSOLVED:	TANNIN & LIGHIN:
COLOR	PCB:	TEMPERATURE:
COMPLETIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS:	TRIHALOMETHANE:
CYANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	***************************************
	COPPER:	SELENTUM
ALIMINAM	GOLD	SILICA:
ANTIHONY	IRON	SILICON
ARSENIC	LEAD	SILYER:
BARTUH:	MAGNESIUM	SODIUM:
BERYLLIUM:	MANGANESE	THALLIUM
CACHIUM:	HERCURY	TIN:
CALCIUM	MOLYBDENCH	TITANIUM
CHRONIUM:	NICKEL	HUIDANAY
HEXAVALENT CHROMIUM:	POTASSIUM	ZINC:
COBALT:	ruiacción	

COMMENTS: TETRACHLORETHYLENE = (0.250

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MICHAEL D. MOORE

## ANALTTICAL LABORATY RIES, INC.

#### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT SAMPLE NUMBER - 8603

SPECIAL RESOURCE MANAGEMENT DATE OF COLLECTION -: 11/24/87 200 NORTH 4TH ST - SUITE #10 TIME OF COLLECTION -: 10:45 AM BOISE , ID 83702 DATE RECEIVED ----: 11/24/87 DATE REPORTED ----: 12/02/87 SUBMITTED BY -: SOURCE --: SRM-WP-S-21 RESULTS IN MG/1(PPH) RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISHS/100ml BIOCHEHICAL OXYGEN ----: FECAL COLIFORM BACTERIA -: TOTAL COLIFORM, HPN ----: CHEMICAL OXYGEN DEMAND -: FECAL STREP BACTERIA ----: FECAL COLIFORM, MPH ---: RESIDUE HUNFILTERABLE ---: TOTAL COLIFORM BACTERIA -: PSEUDOHONAS ----: OIL & GREASE ----: STAPHYLUCOCCUS / gram ---: RESULTS IN MG/L (PPM) UNLESS NOTED ACIDITY ----CYANIDE WEAK ACID DIS ---: PHOSPHATE TOTAL ----: ALKALINITY ----: E P TOXICITY ----: RADIUM GA-GB ----: AMMONTA DIRECT ----FLUORIDE DISTILLED ----: RESIDUE VOLATILE ----: AMPONIA DISTILLED -----: FLUORIDE DIRECT ----: RESIDUE TOTAL ----BICARBONATE ----: HERBICIDES ----: RESIDUE TOTAL FILTERABLE-: SETTLEABLE MATTER ---: RONTOE ----NITRATE N ----: STD PLATE COUNT ----SULFATE ------CARBON DIOXIDE ----: NITRITE N ----NITROGEN ORGANIC ---CARBONATE ----: CHLORIDE ----SURFACTANT ----: NITROGEN TOTAL KJELDAHL -: CHLORINE RESIDUAL ----: OXYGEN DISSOLVED ---: TANNIN & LIGHIN ----: PC8 -----COLOR ----:: TEMPERATURE ----CONDUCTIVITY ----: PESTICICES ----TOTAL ORGANIC CARBON ----: CORROSIVITY ----: PHENOLS ----TRIHALOMETHANE ----: pH (S.U.) -----CYANIDE FREE ----: TURBIDITY (N.T.U.) ----: PHOSPHATE URTHO ----CYANIDE TOTAL ----: ALUMINAM ----: COPPER ---SELENTUM ----ANTIHONY ----SILICA ----: 60LD ----: IRON ------ARSENIC ----BARIUM -----SILVER ----: SODIUM -----NAGNESIUM ----BERYLLIUM -----CAEHIUM -----MANGANESE ----THALL TUN -----CALCIUM ----HERCURY -----HOLYBOEHUH ----: CHROMIUM ----TITANIUM ----: VANADIUM ------HEXAVALENT CHROHIUM ----NICKEL ---

POTASSIUM ----:

CCHMENTS: TETRACHLOROETHYLENE = (0.250

COBALT ----:

HICHAEL D. HOURE

# ANALTTICAL LABORATERIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8549

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702

DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: 1:01 PM DATE RECEIVED ----: 11/23/87 DATE REPORTED ---: 12/02/87

SUBMITTED BY -: PAT STOLL SOURCE --: SRM-WP-SG-BD-1

RESULTS IN MG/1(PPM)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISHS/100ml
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, NPN:
CHEMICAL OXYGEN DEMAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPH:
RÉSIDUE NONFILTERABLE —:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS:
OIL & GREASE:		STAPHYLOCOCCUS / gram:
RESULTS IN HG/L (PPM) UNLESS HOTED		
ACIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL
ALKALINITY ————:	E P TOXICITY:	RADIUM GA-GB:
ANNONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
APPIONTA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL
BICARBONATE:	HERDICIDES:	RESIDUE TOTAL FILTERABLE-:
BGRON:	HARONESS:	SETTLEABLE MATTER:
WHIDE:	NITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE:	NITRITE N:	SULFATE:
CARBONATE:	NITROGEN ORGANIC:	SUFIDE:
CHLORIDE:	NITRUGEN TOTAL KJELDAHL -:	SURFACTANT
CHLORINE RESIDUAL:	OXYGEN DISSOLVED	TANNIN & LIGHIN:
COLÚR:	PC8:	TEMPERATURE
CONDUCTIVITY:	PESTICICES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS	TRIHALOMETHANE
CYANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
ALUMINUM:	0.000	
ANTIMONY	COPPER::	SELENTUM:
ARSENIC	IRON	SILICA:
BARIUM	LEAD:	SILICW
BERYLLIUM —————		SILVER:
CADMIUM	MAGNESIUM:	SODIUM:
CALCIUM:	MANGANESE:	THALLIUM::
HRONIUM	HERCURY	TIN:
	MOLYBDENAM:	TITANUM:
HEXAVALENT CHRONIUM:	NICKEL:	YANADIUM:
COBALT::	POTASSIUM:	ZINC:

CONVENTS: TETRACHLOROETHYLENE = (0.250

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HICHAEL D. MOURE

## ANALTTICAL LABORATORIES, INC.

#### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT SAMPLE NUMBER - 8550

SPECIAL RESOURCE MANAGEMENT DATE OF COLLECTION -: 11/23/87 200 NORTH 4TH ST - SUITE #10 TIME OF COLLECTION -: 12:43 PM BOISE , ID 83702 DATE RECEIVED ----: 11/23/87 DATE REPORTED ----: 12/02/87 SUBMITTED BY -: PAT STOLL SOURCE --: SRM-WP-SG-BD-2 RESULTS IN HG/1(PPH) RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISMS/100ml BIOCHÉMICAL OXYGEN ----: FECAL COLIFORM BACTERIA -: TOTAL COLIFORM, MPN ---: CHEMICAL OXYGEN DEMAND --: FECAL STREP BACTERIA ----: FECAL COLIFORM, MPN ----: RESIDUE NUNFILTERABLE --: TOTAL COLIFORN BACTERIA -: PSEUDOMONAS ----: OIL & GREASE -----STAPHYLOCOCCUS / gram ---: RESULTS IN MG/L (PPM) UNLESS HOTED ACIDITY ---::
ALVALINITY ---::
APPIONIA DIRECT ---: CYANIDE WEAK ACID DIS ---: PHOSPHATE TOTAL ----: E P TOXICITY ----RADIUM GA-GB -----RESIDUE VOLATILE ----: FLUORIDE DISTILLED ----: AMMONIA DISTILLED -----FLUORIDE DIRECT ----: RESIDUE TOTAL ----: BICARBONATE ---HERBICIDES ----: RESIDUE TOTAL FILTERABLE-: BORON -----SETTLEABLE MATTER ----: ROHIGE ----STD PLATE COUNT NITRATE N -----CARBON DIOXIDE -----:
CARBONATE ----:
CHLORIDE ----: HITRITE N -----SULFATE -----:
SULFIDE ----: NITROGEN ORGANIC ----: SURFACTANT ----NITROGEN TOTAL KJELDAHL -: CHLORINE RESIDUAL ---: TAMIN & LIGHIN -----OXYGEN DISSOLVED ---: COLÚR -----TEMPERATURE ----PESTICIDES -CONDUCTIVITY ---:
CORRUSIVITY ---: TOTAL ORGANIC CARBON ----: PHENOLS ---: TRIHALOMETHANE ---: CYANTOE FREE -----TURBIDITY (N.T.U.) -----PHOSPHATE ORTHO ----CYANIDE TOTAL ----ALUMINUM -----COPPER ----SELËNIUH -----ANTIHONY ----: SILICA ----ARSENIC ----IRON -----: STLICON — BARIUM -----SILYER -----NAGNESTUM ----SODIUM -----MANGAVESE ----THALLIUM ----HERCURY ----CALCIUM ----TIN -----

HOLYBOENUM ----

NICKEL ----

POTASSIUM ----

COMMENTS: TETRACHLOROETHYLENE : (0.250)

CHROHIUM -----HEXAVALENT CHROHIUM -----

COBALT -----

TITANTUH ----

· HUIDANAY

MICHAEL D. MOORE

## ANALYTICAL LABORATO MES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8546

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702

DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: 11:30 AM DATE RECEIVED ----: 11/23/87 DATE REPORTED ---: 12/02/87

SUBMITTED BY -: PAT STOLL SOURCE --: SPM-WP-SC-ID1

RESULTS IN HG/1(PPM)	RESULTS IN URGANISMS/100ml	RESULTS IN ORGANISMS/100m
BIOCHÉHICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, HPH
CHEHICAL OXYGEN DEHAND:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN
RESIDUE NONFILTERABLE:	TOTAL COLIFORN BACTERIA -:	PSEUDOHONAS
OIL & GREASE:		STAPHYLOCOCCUS / graa
RESULTS IN HG/L (PPH) UNLESS HOTED		**************************************
ACIDITY:	CYANIDE HEAK ACID DIS:	PHOSPHATE TOTAL
ALKALIHITY:	E P TOXICITY:	RADIUM GA-GB
AMCHIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE
AMMANIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL
BICARBONATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-
IORÚN:	HARDNESS:	SETTLEABLE MATTER
COUDE	NITRATE N:	STD PLATE COUNT
MORON DIOXIDE:	NITRITE N	SULFATE
ARBONATE	NITROGEN ORGANIC:	SULFIDE
HLURIGE:	NITROGEN TOTAL KJELDAHL -:	SURFACTANT
HLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANNIN & LIGNIN
OLOR	PCB:	TEHPERATURE
CONDUCTIVITY:	PESTICIDES	TOTAL ORGANIC CARBON
CRRUSIVITY:	PHEHOLS	TRIHALOMETHANE -
YANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.)
YANIDE TOTAL:	PHOSPHATE ORTHO	101035411 [N-1.44.) .
I FAUTURA		
LUNINA:	COPPER:	SELENIUM
NTTHONY	GOLD:	SILICA:
RSENIC:	IRON:	SILICUM:
ARTUM:	LEAD:	SILVER:
ERYLLIUM:	MAGNESIUM:	SODIUM:
WHICH	HANGANESE	THALLIUM:
ALCIUM	MERCURY:	IIN
RCHIUM;	MOLYBOEHUM:	TITANIUM:
EXAVALENT CHROHIUH:	NICKEL	VANADIUM:
OBALT:	POTASSIUM	ZINC:

CONTENTS: TETRACHLOROETHYLENE = (0.250

MICHAEL D. MOURE

### ANALYTICAL LABORATO RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT

#### SAMPLE NUMBER - 8547

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702 DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: 12:20 PM DATE RECEIVED ----: 11/23/87 DATE REPORTED ----: 12/02/87

SUBMITTED BY -: PAT STOLL SOURCE --: SRM-WP-SG-LD1-1.5

RESULTS IN HG/1(PPH)	RESULTS IN URGANISHS/100mi	RESULTS IN URGANISMS/100ml
BIOCHEMICAL DXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, MPN:
CHEMICAL OXYGEN DEMAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN:
RESIDUE NONFILTERABLE:	TOTAL COLIFÓRM BAÇTERÍA =:	PSEUDOHONAS:
OIL & GREASE:		STAPHYLOCOCCUS / gram:
RESULTS IN MG/L (PPM) UNLESS NOTED		
ACIDITY:	CYANIDE HEAK ACID DIS:	PHOSPHATE TOTAL:
ALXALINITY:	E P TOXICITY:	RADIUM GA-GB::
AMMONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
APPIONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL:
BICARBONATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
BORON	HARDHESS:	SETTLEABLE HATTER:
CHIDE:	NITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE:	NITRITE N:	SULFATE:
CARBONATE:	HITROGEN ORGANIC:	SULFIDE:
CHLORIDE:	NITROGEN TOTAL KJELDAHL =:	SURFACTANT:
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANNIN & LIGHIN:
COLÚR:	PO8:	TEMPERATURE:
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS:	· TRIHALOMETHANE:
CYANIDE FREE:	pH (Ṣ.U.):	TURBIDITY (N.T.U.):
. CYANIDE TOTAL:	PHOSPHATE ORTHO:	
ALUMINUM	COPPER	ATI FILLIA
ANTIHONY:	GOLD	SELENIUM
ARSENIC	IRON	SILICON
BARIUM	LEAD	SILVER
BERYLLIUM:	MAGNESTUM	SODIUM
CADMIUM	MANGANESE	THALLIUM
CALCIUM	MERCURY	TIN:
CHRONIUM	MOLYBOENUM	TITANIUM
HEXAVALENT CHROMIUM:	NICKEL	VANADIUM:
COBALT:	POTASSIUM	ZINC
GUDAL!	ronassiun	ZIN.

COMMENTS: TETRACHLOROETHYLENE = (0.250

Michael D. Hoore

#### ANAL TICAL LABORATO RIES, INC.

#### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT SAMPLE NUMBER - 8548

SPECIAL RESOURCE MANAGEMENT DATE OF COLLECTION -: 11/23/87 200 NORTH 4TH ST - SUITE #10 TIME OF COLLECTION -: 11:43 AM BOISE , ID 83702 DATE RECEIVED ----: 11/23/87 DATE REPORTED ----: 12/02/87 SUBMITTED BY -: PAT STOLL SOURCE --: SRM-WP-SG-LD2 RESULTS IN HG/1(PPH) RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISMS/100ml BIOCHEHICAL OXYGEN ----: FECAL COLIFORM BACTERIA -: TOTAL COLIFORM, MPN ---: CHÉHICAL CXYGEN DEMAND -: FECAL STREP BACTERIA ---: FECAL COLIFORM, HPN ---: PSEUDOMONAS ----: RESIDUE NONFILTERABLE ---: TOTAL COLIFORM BACTERIA -: OIL & GREASE ----: STAPHYLOCOCCUS / gram ---: RESULTS IN MG/L (PPM) UNLESS HOTED ACIDITY ----: CYANIDE WEAK ACID DIS ---: PHOSPHATE TOTAL ---: ALKALINITY ----: RADIUM GA-GB ----: E P TOXICITY ----AMMONIA DIRECT FLUORIDE DISTILLED ----: RESIDUE VOLATILE ----: RESIDUE TOTAL ----FLUORIDE DIRECT ---:
HERBICIDES ---: AMADHIA DISTILLED ----: BICARBONATE ---: RESIDUE TOTAL FILTERABLE-: HARDHESS ----BORCH -----SETTLEABLE HATTER ---: ROHICE ----NITRATE N ---:
NITRITE N ---: STD PLATE COUNT ----: CARBON DIOXIDE ----: SULFATE -----CARBONATE ---:
CHLORIDE ---: NITROGEN ORGANIC ----: NITROGEN TOTAL KJELDAHL -: CHLURINE RESIDUAL ----: OXYGEN DISSOLVED ----: TANNIN & LIGNIN ----: TEMPERATURE ---: PC8 -----CONDUCTIVITY ----: PESTICIDES ----TOTAL ORGANIC CARSON ----: PHENOLS ---: CORRUSIVITY ----: TRIHALCHETHANE ----: CYANICE FREE ---: TURBIDITY (H.T.U.) ----: PHOSPHATE ORTHO -----CYANIDE TOTAL ----: SELENIUM -----ALUMINAM ----: COPPER -----GOLD ----: ANTIHONY ----: SILICA ---SILICON ----IRON -----: ARSENIC ----: SILVER -----BARILM ----MAGNESIUM ----: BERYLLIUM ----: SODIUM ----CACHIUM ----: THALLIUM -----MANGANESE ----HEROURY ----CALCIUM ----: MOLYBOENCH ----TITANIUM -----:
VANADIUM ----: CHRONIUM ----HEXAVALENT CHRUMIUM ---POTASSIUM ----: COBALT ----:

COMMENTS: TÉTRACHLOROETHYLENE = (0.250

HICHAEL D. HOORE

# ANALTTICAL LABORATORIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8589

SPECIAL RESOURCE MANAGEME 200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702  SUBMITTED BY -: SOURCE: SRM-WP-NT-2	0	DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: DATE RECEIVED: 11/24/87 DATE REPORTED: 12/02/8
RESULTS IN MS/1(PPM)	RESULTS IN GRGANISMS/100ml	RESULTS IN ORGANISMS/100ml
BIOCHENICAL OXIGEN	FECAL COLIFORN BACTERIA -:	TOTAL COLIFORM, HPN:
CHENICAL OXYGEN DENAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, HPN:
RESIDUE NONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS
OIL & GREASE:		STAPHYLOCOCCUS / graga:
RESULTS IN MG/L (PPM) UNLESS NOTED		
ACIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY:	E P TOXICITY:	RADIUM GA-GB
APPIONTA DIRECT:	FLUORIDE DISTILLED	RESIDUE VOLATILE
AMMONIA DISTILLED:	FLUORIDE DIRECT	RESIDUE TOTAL
BICARBONATE:	HERBICIDES	RESIDUE TOTAL FILTERABLE -:
80RON:	HARDNESS	SETTLEABLE MATTER
CHIDE	HITRATE N	STD PLATE COUNT
TARBON DIOXIDE:	NITRITE N	SULFATE
CARBONATE:	NITROGEN ORGANIC	SULFIDE
CHE.ORIDE:	NITROGEN TOTAL KJELGAM -:	SURFACTANT
CHLORINE RESIDUAL:	OXYGEN DISSOLVED	TANNIN & LIGHIN
COLOR:	PC8	TEMPERATURE
CONDUCTIVITY:	PESTICIDES	TOTAL ORGANIC CARBON
CORROSIVITY	PHENOLS	TRIHALONETHANE
CYANIDE FREE:	pH (S.U.)	TURBIDITY (N.I.U.)
CYANIDE TOTAL:	PHOSPHATE ORTHO	Market (II.).o.,
AI SHAFLENA	******	
ALUMINUM:	COPPER:	SELENIUM
•	66LD:	SILICA:
ARSENIC:	IRON:	SILICON:
BARIUH:	LEAD:	STLVER:
BERYLLIUM:	HAGNESIUM:	SODIUM:
CADHIUN	HANGANESE:	THALLIUM;
CALCIUM	HERCURY:	TIN:
CHRONIUM	HOLYBDENCH	TITANIUM:
HEXAVALENT CHRONIUM:	NICKEL:	YANADIUM:
COBALT:	POTASSIUM:	ZINC:

COMMENTS: TETRACHLOROETHYLENE = (0.250

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MICHAEL D. HOURE

## ANAL' TICAL LABORATO MES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

#### WATER QUALITY REPORT

#### SAMPLE NUMBER - 8587

200 NORTH 4TH ST - SUIT BOISE , ID 83702		TIME OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: 3:10 PM DATE RECEIVED: 11/24/87 DATE REPORTED: 12/02/8
SUBMITTED BY -: SOURCE: SRM-WP-NT-4		
RESULTS IN HG/1(PPH)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISHS/100e1
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, MPN:
CHENICAL OXYGEN DENAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, HPN:
RESIDUE NONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS
OIL & GREASE:		STAPHYLUCOCCUS / gram:
RESULTS IN HG/L (PPM) UNLESS NOTED .		`
ACIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY:	E P TOXICITY:	RADIUM GA-GB:
AMMONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
AMMONIA DISTILLED:	FLUORICE DIRECT:	RESIDUE TOTAL:
BICARBUNATE	HERBICIDES	RESIDUE TOTAL FILTERABLE=:
BURCH:	HARDNESS:	SETTLEABLE HATTER:
MIDE:	HITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE:	HITRITE N:	SULFATE:
CARBONATE:	NITROGEN ORGANIC:	SUFICE:
CHLORIGE:	NITROGEN TOTAL KJELDAHL -:	SURFACTANT:
CHLORINE RESIDUAL:	OXYGEN DISSULVED:	TANNIN & LIGNIN:
COLÚR	PC8:	TEMPERATURE:
CONDUCTIVITY:	PESTICIDES	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS:	TRIHALOMETHANE
CYANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
ALUMINUM:	COPPER:	SELEHIUM:
ANTIHONY:	60LD:	SILICA:
ARSENIC:	IRON:	SILICON:
BARIUM:	LĒAD:	SILVER:
BERYLLIUM:	HAGNESIUM:	SODIUM:
CADMIUM:	MANGANESE:	THALLIUM:
CALCIUM:	MERCURY:	TĪN:
CHRONIUM	MOLYBDEHAM:	TITANIUM:
HEXAVALENT CHROHIUM:	NICKEL	VAHADIUM:
COBALT:	POTASSIUM:	ZĪNC:

1

COMMENTS: TETRACHLOROETHYLENE = (0.250

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HICHAEL D. HOORE

## ANALTICAL LABORATCRIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 9139

DATE OF COLLECTION -: 12/15/87 SPECIAL RESOURCE MANAGEMENT TIME OF COLLECTION -: 4:40 PM 200 NORTH 4TH ST - SUITE 310 DATE RECEIVED ----: 12/16/87 BOISE , ID 83702 DATE REPORTED ----: 12/18/87 SUBMITTED BY -: SOURCE --: SRM-WP-S #22 (SOIL) RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISMS/100ml RESULTS IN MG/1(PPM) TOTAL COLIFORM, HPN ---: FECAL COLIFORM BACTERIA =: BIOCHENICAL OXYGEN ----: FECAL COLIFORM, HPN ---: FECAL STREP BACTERIA ----: CHÉHICAL OXYGEN DEHAND -: PSEUDOMONAS ---: TOTAL COLIFORN BACTERIA -: RESIDUE NONFILTERABLE ---: STAPHYLOCOCCUS / gram ---: UIL & GREASE ----RESULTS IN HG/L (PPH) UNLESS NOTED PHOSPHATE TOTAL ----: CYANIDE NEAK ACID DIS ---: ACIDITY ----: RADIUM GA-GB ----: ALKALIHITY ----: E P TOXICITY ---: FLUORICE DISTILLED ---: RESIDUE VOLATILE ----: AMMONIA DIRECT ----: RESIDUE TOTAL ----FLUORIDE DIRECT ----: AMMONIA DISTILLED ----: RESIDUE TOTAL FILTERABLE-: HERBICIDES ---: BICARBONATE ----: SETTLEABLE MATTER ---: ROMIDE ----HARDHESS ----NITRATE N ----: STD FLATE COUNT ----: CARBON DIOXIDE ----: SULFATE ----SULFIDE ---:
SURFACTANT ---: CARBUNATE ----:
CHLURICE ----: NITROGEN ORGANIC ----: NITRUGEN TOTAL XJELDAML -: TANNIN & LIGNIN ---: TEMPERATURE ---: OXYGEN DISSOLVED ---: CHLURINE RESIDUAL ---: PC8 ----COLOR ----TOTAL ORGANIC CARBON ---: CUNDUCTIVITY ---: PESTICIDES -TRIHALGHETHANE ---: PHENOLS ---CORROSIVITY ---pH (S.U.) TURBIDITY (N.T.U.) ---: CYANIDE FREE ----: CYANIDE TOTAL ----PHOSPHATE URTHO ----SELENIUM ----: CUPPER ----ALUMINAM ----SILICA ----GOLD -----ANTIKAY ---: SILICON ---:
SILVER ---: ARSENIC ---: LEAD ----MAGNESIUM ----SODIUM ----BERYLLIUM ----THALLIUH ----CADNITUM ----HANGAVESE ----TIN ----CALCIUM ----TITANTUM -----CHRONIUM ----: HOLYEDEHUN ----VANADIUM ----NICKET ---HEXAVALENT CHRONIUM ---: POTASSIUM ----:

COMMENTS: TETRACHLOROETHILENE = (0.250

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MICHAEL D. HOURE

# ANALYTICAL LABORATCRIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

#### WATER QUALITY REPORT SAMPLE NUMBER -244

SPECIAL RESOURCE MANAGEMENT DATE OF COLLECTION -: 01/13/88 200 NORTH 4TH ST - SUITE #10 TIME OF COLLECTION -: 3:20 PM BOISE , ID 83702 DATE RECEIVED ----: 01/13/88 DATE REPORTED ----: 01/21/88 SUBMITTED BY -: SOURCE -: SRM-WP-24 SOIL COMPOSITE RESULTS IN HG/1(PPH) RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISMS/100ml BIOCHEHICAL OXYGEN ---: FECAL COLIFORM BACTERIA -: TOTAL COLIFORM, HPN ----: CHEMICAL OXYGEN DEMAND -: FECAL STREP BACTERIA ---: FECAL COLIFORM, HPH ----: RESIDUE NONFILTERABLE ---: TOTAL COLIFORN BACTERIA -: PSEUDOMONAS ----OIL & GREASE ---: STAPHYLOCOCCUS / gram ---: RESULTS IN HG/L (PPH) UNLESS NOTED ACIDITY ---: CYANIDE WEAK ACID DIS -: PHOSPHATE TOTAL ----: ALKALINITY ----: E P TOXICITY ----: RADIUM GA-GB ----AMMONIA DIRECT ----FLUORIDE DISTILLED -: RESIDUE VOLATILE ----: APPIDNIA DISTILLED ----: RESIDUE TOTAL ----: BICARBONATE ----RESIDUE TOTAL FILTERABLE-: BURON -----REONIDE ----SETTLEABLE MATTER ----: NITRATE N ----STD PLATE COUNT -----ARBON DIOXIDE -----NITRITE N -----HITROGEN ORGANIC ----CARBONATE ----SURFACTANT ----NITROGEN TOTAL KJELDAHL -: OXYGEN DISSOLVED ---: CHLORINE RESIDUAL ----TANNIN & LIGHIN ----: PC8 COHOUCTIVITY ----TEMPERATURE ----PESTICIDES ----CORROSIVITY ----TOTAL ORGANIC CARBON ----: PHENOLS ---TRIHALOMETHANE ----: PHOSPHATE ORTHO ---: CYANIDE FREE ----: TURBIDITY (N.T.U.) ----: CYANIDE TOTAL ----ALUMINUM ----: COPPER ----: SELENIUM --earn ------ARSENIC ----IRON -----BARIUM ----LEAD -----HAGNESIUM ----BERYLLIUH -----MANGANESE ---CADHIUM -----THALLIUM ----CALCIUM -----MERCURY ----TIN ----MOLYBOENUM ----: TITANTUM -----VANADIUM ----NICKEL ----HEXAVALENT CHRONIUM ----:

POTASSIUM ----

COHVENTS: TETRACHLOROETHYLENE = (0.250 MG/KG

MÍCHAEL D. HOORE



## Professional Service Industries, Inc. **Analytical Services Division**

### ANALYTICAL REPORT

TESTED FOR:

SPECIAL RESOURCE MANAGEMENT PROJECT:

Chemical Analysis

200 N. 4th Avenue

Suite 206

Boise, ID 83702

ATTN: BRAD HARR

DATE:

November 30, 1987

OUR REPORT NO.: 214-73045-01

**REMARKS:** 

Date Received:

November 24, 1987

Sample Identification:

One soil sample dated 11/23/87 labeled SRM-WP-NT-2A. Others labeled

individually.

Methodology Employed:

Standard Methods, 16th Edtion

Analysis	Results	Performed by
Metals analyses on di	ry weight basis.	
	<0.10	SM 11/27/87, 14:28 SC 11/30/87, 13:00

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Q.A. DATA

<u>Analysis</u>	<u>Original</u>	Duplicate	(R)	2 Recovery of Spike
Antimony	<0.01	<0.01	0	111
Arsenic	0.015	0.013	0.002	109
Beryllium	<0.10	<0.10	0	93
Cadmfum	<0.01	<0.01	0	92
Chromium	0.011	0.016	0.005	112 -
Copper	0.092	0.085	0.007	86
Lead	0.016	0.017	0.001	112
Mercury	<0.002	<0.002	Ô	93
Nickel	0.25	0.26	0.01	92
Selenium	0.10	0.10	0	91
Silver	<0.01	<0.01	õ	90
Thallium	<0.10	<0.10	ō	102
Zinc	0.39	0.41	0.02	88

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ši County Řoad C2. St. Paul. Minnesota 55113 (612) 636-7173

LABORATORY ANALYSIS REPORT NO: 64 01/20/68

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1218 ' SERCO SAMPLE NO: SAMPLE DESCRIPTION: SRM-WP 5-24A

IALYSIS	
---------	--

(WPIDID:	
inzene, ug/kg	(2.0
omodichloromethane, uz/kz	<20
romoform, ug/kg	<30
romomethane, ug/kg	< 100
rbon tetrachloride, ug/kg	<b>45.0</b>
hlorobenzene, ug/kg	<3.0
ilomethane, ug/kg	<11
Chroroethylvinyi ether, ug/kg	<30
hioroform, ug/kg	<2.0
iloromethane, ug/kg	⟨25
ibromochloromethane, ug/kg	<14
2 Dicaloropenzene, ug/kg	<4.0
3 Dichlorobenzene, ug/kg	<4.0
,4 Dichlorobenzane, ug/k3	<4.0
,1 Dichloroethane, uz/kg	<b>&lt;5.</b> 0
2 Dichloroethane, ug/kg	<b.0< td=""></b.0<>
,1 Dichloroethylene, ug/kg	<2.0
2 Dichloroetnylene, trans, ug/kg	<2.0
,2 Dicaloropropane, ug/kg	<5.0
,3 Dichloro-1-propylene, cis, ug/kg	<11
,3 Dichloro-1-propylene, trans, ug/kg	<3.0
thylbenzene, ug/kg	<4.0
ethylene chioride, ug/kg	<2 <i>5</i> .

est County Road C2. St. Paul. Minnesota 55113 (612) 636-7173

LABORATORY ANALYSIS REPORT NO: 01/20/88

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SERCO SAMPLE NO: SAMPLE DESCRIPTION:

1218 SRri-#P

BHAN 5-24A

NALYSIS:	e lite.
,1,2,2 Tetrachloroethane,	<13
jug/kg Tetracoloroethylene, ug/kg	28
oluene, ug/kg	ζ2.0 /3.0
,1,1 Trichloroethane, ug/kg	⟨3.0
rrichloroetnylene, ug/kg	<1.0
.richlorofluoromethane, ug/kg	<1.0
/inyl chloride, ug/kg	<10
,1,2 Trichloroethane, ug/kg	<7.0
prolein, ug/kg	<b>&lt;000</b>
Acrylonitrile, ug/kg	<230
्यु -चं	

All analyses were performed using EPA or other recognized methodologies.

Report submitted by,

Project Manager



# **SERCO Laboratories**



JAN 2 1 1988

1931 Weşt County Road C2. St. Paul. Minnesota 55113 (612) 636-7173

# SRM, INC. / BOISE

LABORATORY AMALYSIS REPORT MO: 01/20/88

04

Page

Special Resource Management 200 North Fourth, Suite 206 Boise, ID 83702

Mr. Brad Harr

DATE COLLECTED: DATE RECEIVED: COLLECTED BY: 01/13/88

PICKED UP AY:

CLIENT CLIENT

Sample Type:

Water Soil

	•				Kitarn 2003
SERCO SAMPLE SAMPLE DESCRIPTI		1178 WELL 13A	1163 WELL 16A	1198 WELL 17A	1208 _5-25
nzene, ug/L	<1.0	<1.0	<1.Ú	<1.0	•
comoform, ug/L	<6.0	<6.0	<ó.0	<0.0	<u>-</u>
omometnane, uz/L	₹20	<20	<20	<20	- '
of ichloromethane, ug/L	<b>&lt;2.0</b>	<2.0	<2.0	<2.0	-
Carbon tetracaloride, ug/L	<3.0	<3.0	<3.0	<3.0	•
:ioropenzene, ug/L	<1.3	<1.0	<b>&lt;1.</b> 0	<1.ŭ	-
loroetnane, ug/L	<b>&lt;5.</b> 3	<5.û	くう・ノ	<b>&lt;5.0</b>	-
Chloroethylvinyl ether, ug/L	<10	<10	<10	<10	<del>=</del>
gloroform, ug/L	<1.0	<1.0	<1.0	<1.0	-
loromethane, ug/L	<6.0	<6.0	<6∙0	<5.0	-
oromocaloromethane, ug/L	<2.0	<2.0	<2.0	<2.0	-
2 Dichlorovenzens, ug/L	(2.)	<2.0	<2.0	<2.0	-
1,3 Dichlorobenzene, ug/L	<2.3	<2.0	<2.0	<2.0	=
4 Dichlorobenzene, ug/L	⟨2.0	<2.0	<2.0	<2.0	-
1 Dichloroethane, ug/L	<2.0	<2.0	<2.0	<2.0	-
1.2 Dichloroethane, ug/L	<2.0	<2.0	<2.0	<2.0	-
1 Dionloroethylene, ug/L	<2.0	<2.0	<2.0	<2.0	
2 Dichloroethylene, trans, ug/L	<1.0	<1.0	<1.0	4.5	-
.2 Dichloropropane, ug/L	<2.0	<2.0	<2.0	<2.0	-
3 Dichloro-1-propylene, trans, ug/I	<2.0	<2.0	<2.0	<2.0	-
3 Dichloro-1-propylene, cis, ug/L	<1.0	<1.0	<1.ŭ	<1.0	-
:hylbenzene, ug/L	<2.0	<2.0	<2.0	<2.0	-
thylene chloride, ug/L	<9.0	<b>49.3</b>	49.3	(9.0	-
,1,2,2 Tetracoloroethane, uz/L	<3.0	<3.0	<3.0	26	<del>~</del>

oproved by:

< means "not detected at this level".</pre>

1 mg = 1000 ug.



West County Road C2, St. Paul. Minnesota 35113 (612) 636-7173

LABORATORY ANALYSIS REPORT NO: 54 01/20/88

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	SERCO SAMPLE NO: SAMPLE DESCRIPTION:	1163 SRM-WP- WELL 143 (A)	1178 Well 15a	116d Well 10à	1198 Well 17a	1203 5 <b>-</b> 25
IALYSI3:	g.kw	14 A				<b>ه</b> د مد بدر به شدند بدر مد
atracoloroethylene,	ug/L	<1.0	35	14	2100	-
pluene, ug/L		<1.0	<1.0	<1.0	<1.0	-
1,1,1 Tricalorouthane	. ug/L	<1.0	<1.0	<1.0	<1.0	-
1,1,2 Tricaloroethane	•	<1.0	<1.0	<1.0	<1.0	-
ichloroethylene, ug	• -	<1.0	<1.0	<1.0	13	-
lrichloröfluorometnan	ne, ug/L	<1.0	<1.J	<1.0	<1.0	-
.nyi chloride, ug/L	, ,	<6.J	<0.0	<o.0< td=""><td>&lt;6.0</td><td>-</td></o.0<>	<6.0	-
or in, ug/L		<100	< 100	<b>&lt;1</b> 00	<100	÷
erylonitrile, ug/L		<10	<10	<10	<10	-
anzene, ug/kg		#	=	-	-	<2.0
oromodichloromethane,	ug/kg	_	-	-	-	<20
romoform, ug/kg		<del>-</del>	<b>=</b>	<del>44</del>	-	<30
Fomomethane, ug/kg		-	<del>-</del>	-	-	<100
aroon tetrachloride,	ug/kg	-	-	-	-	<5.0
Diorobenzene, ug/kg		-	-	-	-	<3.0
iloroethane, ug/kg		-	-	-	-	<b>&lt;11</b>
: Chloroethylvinyl et	ner, ug/kg		••	-	-	<30
iloroform, ug/kg	•	<b>÷</b>	-	=	-	<2.0
loromethane, ug/kg			-	<del>-</del>	-	<25
Joromoonloromathane,	ug/kg	-	-	<del></del>		<14
,2 Dicnloropenzana,	ug/kg	-	-	-	-	<4.0
,3 Dichlorobenzene,	<del>-</del> -	-	-	-	-	<4.0
,4 Dichlorobenzene,	ug/kg	-	-	-	-	<4.0
,1 Dichloroethane, u	ıg/kg	-	-	-	-	<5.0





# SERCO Laboratories

t County Road C2. St. Paul. Minnesota 55113 (612) 636-7173

LABORATORY ANALYSIS REPORT NO: 64 PAGE 3 01/20/83

;ALYSIS:	SERCO SAMPLE NO: SAMPLE DESCRIPTION:	1100 SRM-WP- WELL 147 (A) 14 A	1178 WELL 15A	118 <u>8</u> Hālī 16a	1198 Well 17a	120á 5-25
******	******************					 6.0
2 Dichloroethane,	ug/kg	-	<b>-</b>	-	-	<2.0
1 Dichloroethylene	e, ug/kg	-	<b>÷</b>	-	-	(2.0
,2 Dichloroethylens	,	<b>=</b>	-	-	-	12.0
trans, ug/kg					_	<5.0
2 Dichloropropane,	पह/स्ड	-	=	-	-	<111
,3 Dienloro-1-propy	rlene, cis, ug/kg	•	-	-	<del></del>	N11
	alaina kumma sicilie	_	_	-	-	<3.0
	lene, trans, ug/kg	_	_		÷	<4.0
nythenzene, uz/kg	Nava	-	_	_	-	<25
-thylene chloride,	ug/xg	_	_	_	-	<b>&lt;</b> 13
1,2,2 Tetracoloroe	chane,	<del></del>				_
u3/kg			==	_	<b>=</b>	<2.0
etrachloroethylene,	, us/kg	•	_			
11		<u> </u>	-	<del>-</del>	-	<2.0
luene, ug/kg		-	<u>~</u>	•	-	<3.0
,1,1 Trichloroethan	ie,					
ug/kg	/\e. <del></del>	-	-	<u> -</u>	-	<1.0
ichloroethylene, u		_	-	-	<b>:-</b>	<1.0
ichlorofluorometna		_	-	_	-	<10
inyl onloride, ug/	Œ	_				
1 3 Mais al successor	na 111/100	-	-	-	-	<7.0
1,2 Tricaloroethan	16, 45/ 45	<b>-</b> .	<del>=</del>	-		<b>&lt;</b> 600
protein, ug/kg	-		-	_	_	<230
rylonitrile, ug/kg	<b>5</b>					

Date extracted: 11/25/87 Date analyzed: 11/29/87

Sample ID: SRM-WP-S#5 1:40 p.m.

Methodology: SW 8240 VOLATILE COMPOUNDS

Compound	Concentration	Reporting Level
Chloromethane	ppm (mg/kg)	ppm (mg/kg) 0.3 0.3
Bromomethane	BDL BDL	0.3
Bromomethane Vinyl chloride Chloroethane Dichloromethane	BDL	0.3
Chloroothono	BDL	0.3
Dichloromethane	BDL	
Acetono	BDL BDL	0.3 3.0
Acetone Carbon disulfide	RDL	3.0
1 1-Dichlorooth	BDL	0.3
1 1 Dichioroethene	BDL	0.3
1,1-Dichloroethene 1,1-Dichloroethane Trans-1,2-dichloroethene	BDL	0.3
Chloroform	BDL	0.3
Chloroform 1,2-Dichloroethane	BDL	0.3
1,2-Dichioroethane	3 . 5	0.3 0.3
2-Butanone	BDL	3.0
1,1,1-Trichloroethane Carbon tetrachloride	BDL	0.3
Vinyl acetate Bromodichloromethane 1,2-Dichloropropane Cis-1,3-dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane	BDL	0.3
Vinyl acetate	BDL	1.5
bromodicatoromethane	BDL	0.3
1,2-Dichioropropane	BDL	0.3
Cis-1,3-dichioropropene	BDL	በ 3
Trichtoroethene	BDL	0.3
Dibromochioromethane	BDL	U . K
1,1,2-Trichloroethane	BDL	<u> </u>
Benzene Trans-1,3-dichloropropane 2-Chloroethylvinylether Bromoform 2-Heyanone	BDL	0.3
Trans-1,3-dichioropropane	BDL_	U3
7-curocoeruAtAtuAteruer	BDL	0.3
Dromoiorm	BDL	<u></u> 0.3
2-Hexanone	BDL	0.3
The thy 1-2-pentanone	BDL	0.3
Tetrachioroethene	BDL	0.3
4-Methyl-2-pentanone Tetrachloroethene 1,1,2,2-Tetrachloroethane	BDL	0.3
Toluene	PDI	0.3
Chlorobenzene	RDI.	0.3
BUILAIDENZENE	<u></u>	
Styrene	BDL,	0.3
Total xylenes	BDL	0.3

BDL= Below detection limit \*\* = Detected but below reporting limit

Surrogate recoveries, \$
1,2-Dichloroethane-d4 112.4
Toluene-d8 121.6
Bromofluorobenzene 82.0

Date extracted: 11/25/87 Date analyzed: 11/29/87

4

Sample ID: SRM-WP-S#11 3:14 p.m.

Methodology: SW 8240 VOLATILE COMPOUNDS

Compound	Concentration	Reporting Level
Chloromathana	ppm (mg/kg) BDL BDL	ppm (mg/kg) 0.3 0.3 0.3 0.3 0.3
Chloromethane	BUL-	
Vinul chloride	BDL	7.3
Chlorothano	BDL	
Dichloromothere		7 . 3
Dichioromethane	BDL	3.o
Acetone Carbon disulfide		
tarbon distillide	BDL	0.3 0.3
1,1-Dichloroethene	BDL	
I,1=Dichloroethane	BDL	
Trans-1,2-dichioroethene	BDL	
1,1-Dichloroethene 1,1-Dichloroethane Trans-1,2-dichloroethene Chloroform 1,2-Dichloroethane	BDL	0.3 0.3 0.3 0.3
1,2-Dichioroethane	BDL	
2-Butanone		<u> </u>
1,1,1-Trichloroethane Carbon tetrachloride	BDL	0.3 0.3 1.5
Carbon tetrachioride	BDL	U . <u>3</u>
Vinyl acetate Bromodichloromethane 1,2-Dichloropropane Cis-1,3-dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane	BDL_	
Bromodiculoromernane	BDL	0.3 0.3 0.3 0.3
1,2401culoropropane	BDL.	U.3
Cis-1,3-dichioropropene	BDL	
Trichloroethene	BDL	
Dipromochioromethane	BDL	0.3 0.3
1,1,2-Trichtoroethane	BDL	0.3
Benzene Trans-1,3-dichloropropane 2-Chloroethylvinylether Bromoform	BDL	0.3
Trans-1,3-dichioropropane	BDL	0.3
2-Chioroethylvinylether	BDL	0.3
Bromoform	BDL	0.3
z-nexanone	BDL	0.3
4-Methyl-2-pentanone	BDL_	0.3
Tetrachloroethene	* *	0.3
4-Methyl-2-pentanone	<u>B</u> DL	0.3
Tólúene Chlorobenzene	BDL	0.3
Chlorobenzene	BDL	0.3
Ethylbenzene	BDL	0.3
stvrene	BDL	0.3 0.3
Total xylenes	BDL	0.3

BDL= Below detection limit
\*\* = Detected but below reporting limit

Surrogate recoveries, 1,2-Dichloroethane-d4 85.2 Toluene-d8 114.8 Bromofluorobenzene 93.6

Date extracted: 11/25/87 Date analyzed: 11/29/87

Sample ID: SRM-WP-S#13 3:39 p.m.

Methodology: SW 8240 VOLATILE COMPOUNDS

, E.,

Compound	Concentration	Reporting Level ppm (mg/kg)0.30.3
Chloromethane	ppm (mg/kg) BDL BDL BDL	ppm (mg/kg)
Bromomethane	BDL	0.3
Bromomethane Vinyl chloride	BDL	0.3
Chloroethane	BDL	03 =
Chloroethane		0.3
Acetone	DDL	0.3
Acetone Carbon disulfide		3.0
1,1-Dichloroethene 1,1-Dichloroethane Trans-1,2-dichloroethene Chloroform	BDL BDL	0,3
1.1-Dichloroethane		0.3
Trans-1 2-dichloroethere	BDL	0.3
Chloroform	BDL	0,3
1,2-Dichloroethane	BDL	0.3 0.3
/ <b>PRUT 3000A</b>		0.3
1.1.1-Trichloroethane	BDL	3.0
1,1,1-Trichloroethane Carbon tetrachloride	BDL	
Vinvl acetate	BDL BDL	
Vinyl acetate  Bromodichloromethane 1.2-Dichloropropage		1.5
1,2-Dichloropropane Cis-1,3-dichloropropene Trichloroethene Dibromochloromethane	BDL_	
Cis=1.3=dichloropropens	BDL	L1 ± 3
Trichloroethene	BDL BDL	
Dibromochloromethane	BDLBDL	
1,1,2-Trichloroethane	BDL BDL	0.3
nenzena		
Trans-1,3-dichloropropane 2-Chloroethylvinylether Bromoform 2-Hexanone	BDL	
2=Chloroethylvinylether	BDL	0.3
Bromoform	BDL	0.3
2-Hexanone	BDL	0.3
4-Methyl-2-pentanone	BDL BDL BDL	0.3
Tetrachloroethene		0.3
1.1.2.2-Tetrachlorgethane		0.3
TOTAGNE		0.3
Chlorobenzene		0.3
Ethylbenzene		0.3
Styrene	201	0.3
Total xylenes	BDL	0.3
	يالام	0.3

BDL= Below detection limit \*\* = Detected but below reporting limit

Surrogate recoveries, 1,2-Dichloroethane-d4 134.0 Toluene-d8 118.0 Bromofluorobenzene 99.8

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Date extracted: 11/25/87 Date analyzed: 11/29/87

1.....

Sample ID: SRM-WP-S#16a 4:27 p.m.

Methodology: SW 8240 VOLATILE COMPOUNDS

Chloromethane	Compound	Concentration	Reporting Level
Chloroethane	Chloromethane	ppm (mg/kg)	pom (ma/ka)
Chloroethane	Bromomethane	BDL	0.3
Diction   Dict	Vinvl chloride		0.3
Diction   Dict	Chloroethane	BDL	0.3
Acetone	Dichloromethane		0.3
Carbon disulfide       BDL       3.0         1,1-Dichloroethene       BDL       0.3         1,1-Dichloroethane       BDL       0.3         Trans-1,2-dichloroethene       BDL       0.3         Chloroform       BDL       0.3         1,2-Dichloroethane       BDL       0.3         2-Butanone       BDL       0.3         1,1,1-Trichloroethane       BDL       0.3         Carbon tetrachloride       BDL       0.3         Vinyl acetate       BDL       0.3         Bromodichloromethane       BDL       0.3         1,2-Dichloropropane       BDL       0.3         Cis-1,3-dichloropropene       BDL       0.3         Trichloroethene       BDL       0.3         Dibromochloromethane       BDL       0.3         Benzene       BDL       0.3         Trans-1,3-dichloropropane       BDL       0.3         Bromoform       BDL       0.3         2-Chloroethylvinylether       BDL       0.3         Bromoform       BDL       0.3         2-Hexanone       BDL       0.3         4-Methyl-2-pentanone       BDL       0.3         Tetrachloroethene       BDL	ACOTORO	BDL	0.3
1,1-Dichloroethane	Carbon disultida		
1,2-Dichloroethane	1,1-Dichloroethene		
1,2-Dichloroethane	1,1-Dichloroethane	90L	0.3
1,2-Dichloroethane	Trans-1,2-dichloroethene	ant	0,3
2-Butanone	Chickordia	BDC	
2-Butanone	1,2-Dichloroethane	BUL	0.3
Carbon tetrachloride       BDL       0.3         Vinyl acetate       BDL       1.5         Bromodichloromethane       BDL       0.3         1,2-Dichloropropane       BDL       0.3         Cis-1,3-dichloropropene       BDL       0.3         Trichloroethene       BDL       0.3         Dibromochloromethane       BDL       0.3         1,1,2-Trichloroethane       BDL       0.3         Benzene       BDL       0.3         Trans-1,3-dichloropropane       BDL       0.3         2-Chloroethylvinylether       BDL       0.3         Bromoform       BDL       0.3         2-Hexanone       BDL       0.3         4-Methyl-2-pentanone       BDL       0.3         Tetrachloroethene       BDL       0.3	Z=Buranone		
BDL	1,1,1-Trichloroethane	anr.	
BDL	Carbon tetrachloride	BDI.	
Cis-1,3-dichloropropene       BDL       0.3         Trichloroethene       BDL       0.3         Dibromochloromethane       BDL       0.3         1,1,2-Trichloroethane       BDL       0.3         Benzene       BDL       0.3         Trans-1,3-dichloropropane       BDL       0.3         2-Chloroethylvinylether       BDL       0.3         Bromoform       BDL       0.3         2-Hexanone       BDL       0.3         4-Methyl-2-pentanone       BDL       0.3         Tetrachloroethene       BDL       0.3	Vinyl acetate	BDr.	
Cis-1,3-dichloropropene       BDL       0.3         Trichloroethene       BDL       0.3         Dibromochloromethane       BDL       0.3         1,1,2-Trichloroethane       BDL       0.3         Benzene       BDL       0.3         Trans-1,3-dichloropropane       BDL       0.3         2-Chloroethylvinylether       BDL       0.3         Bromoform       BDL       0.3         2-Hexanone       BDL       0.3         4-Methyl-2-pentanone       BDL       0.3         Tetrachloroethene       BDL       0.3	Bromodichloromethane	BDI.	
1,1,2-TrichloroethaneBDL0.3BenzeneBDL0.3Trans-1,3-dichloropropaneBDL0.32-ChloroethylvinyletherBDL0.3BromoformBDL0.32-HexanoneBDL0.34-Methyl-2-pentanoneBDL0.3TetrachloroetheneBDL0.3	1,2-Dichloropropane	BDL	
1,1,2-TrichloroethaneBDL0.3BenzeneBDL0.3Trans-1,3-dichloropropaneBDL0.32-ChloroethylvinyletherBDL0.3BromoformBDL0.32-HexanoneBDL0.34-Methyl-2-pentanoneBDL0.3TetrachloroetheneBDL0.3	Cls-1,3-dichloropropene	BDC.	
1,1,2-TrichloroethaneBDL0.3BenzeneBDL0.3Trans-1,3-dichloropropaneBDL0.32-ChloroethylvinyletherBDL0.3BromoformBDL0.32-HexanoneBDL0.34-Methyl-2-pentanoneBDL0.3TetrachloroetheneBDL0.3	Trichloroethene	BDL	
BDL	Dibromochioromethane	BDL	
Trans-1,3-dichloropropane BDL 0.3 2-Chloroethylvinylether BDL 0.3 Bromoform BDL 0.3 2-Hexanone BDL 0.3 4-Methyl-2-pentanone BDL 0.3 Tetrachloroethene BDL 0.3	1,1,2-Trichloroethane	BDL	
2-Chloroethylvinylether BDL 0.3 Bromoform BDL 0.3 2-Hexanone BDL 0.3 4-Methyl-2-pentanone BDL 0.3 Tetrachloroethene BDL 0.3	Benzene_	BDr.	
2-Hexanone BDL 0.3 4-Methyl-2-pentanone BDL 0.3 Tetrachloroethene BDL 0.3	2 Chians 1,3 dichioropropane	BDL_	
2-Hexanone BDL 0.3 4-Methyl-2-pentanone BDL 0.3 Tetrachloroethene BDL 0.3	2-chibroethylvinylether	BDL	
4-Methyl-2-pentanone BDL 0.3 Tetrachloroethene BDL 0.3	2-Hevanone	BDL	
Tetrachloroethene BDL 0.3	4-Mathyl-2-poster	BDL	
BDL	Tetrachloroothone	BDL_	
1.1.7.7-TOPPERALAMANA	1,1,2,2-Tetrachloroethane	BDL	0.3
Toluene 0.3	Toluene	BDL	0.3
Chloropenzene 0.3	Chloropenzene	BDL	
Ethylbenzene	Ethylbenzene	BDL	
Styrene	Styrene	BDLBDL	
Total xylenes BDL 0.3	Total xylenes		

BDL= Below detection limit
\*\* = Detected but below reporting limit

Surrogate recoveries, 1,2-Dichloroethane-d4 70.8 77.0 Bromofluorobenzene 91.2

Date extracted: 11/25/87 Date analyzed: 11/29/87

Sample ID: SRM-WP-NT-1 2:45 p.m.

Methodology: SW 8240 VOLATILE COMPOUNDS

Compound	Concentration	Reporting Level
Chloromethane	ppm (mg/kg) BDL	ppm (mg/kg) 0.3 0.3
Bromomethane	BDL	
Bromomethane Vinyl chloride	BDL	0.3
Chlornethane	BDL	0.3
Chloroethane Dichloromethane	6	0.3 0.3
Acetone	BDL	3.0
Acetone Carbon disulfide	RDI.	0.3
1.1-Dichloroethene	BDL	0.3
1.1-Dichloroethane	BDL	0.3
Trans-1.2-dichloroethene	BDL	0.3
Chloroform	BDL	0.3
1,1-Dichloroethene 1,1-Dichloroethane Trans-1,2-dichloroethene Chloroform 1,2-Dichloroethane	BDL	0.3
zebutanone	BDU	3.0
1,1,1-TrichloroethaneCarbon tetrachloride	BDL.	0.3
Carbon tetrachloride	BDL	0.3
Vinvl acetate	BDL	1.5
Vinyl acetate	RNI.	0.3 0.3
1,2-Dichloropropane Cis-1,3-dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane	BDL	0.3
Cis-1.3-dichloropropene	BDL_	0.3
Trichloroethene	BDL	0.3
Dibromochloromethane	BDL	0.3
1,1,2-Trichloroethane	BDL	0.3
Henzene	BDL.	o.3
Trans-1,3-dichloropropane	BDL	0.3
Trans-1,3-dichloropropane	BDL	0.3
Bromotorm	DULDUL	0.3
Zeneranone	שטם	0.3
4-Methyl-2-pentanone	BDL	0.3
Tetrachloroethene	BDL	0.3
4-Methyl-2-pentanone	BDL	0.3
Toluene	BDL	0.3
Chlorobenzene	BDL	0.3
Ethylbenzene	BDL	0.3
Styrene	BDL	0.3
Total xylenes	BDL	0.3

BDC = Below detection limit \*\* = Detected but below reporting limit

Surrogate recoveries, 1,2-Dichloroethane-d4 93.2 Toluene-d8 113.6 Bromofluorobenzene 92.0

Date extracted: 11/25/87 Date analyzed: 11/29/87

Sample ID: SRM-WP-NT-2a 3:00 p.m.

Methodology: SW 8240 VOLATILE COMPOUNDS

Compound	Concentration	Reporting Level
Chloromethane	ppm (mg/kg) BDL	ppm (mg/kg) 0.3 0.3
D	BDL	
Vinvl chloride	BDL	ŏ:3 ^
Vinyl chloride	BDL	0.3
Dichloromethane		0.3
Acetone	BDL	3.0
Acetone Carbon disulfide	BDL	
1.1-Dichlorgethene	BDL	ŏ.3
1.1-Dichloroethane	BDL	0.3
1,1-Dichloroethene 1,1-Dichloroethane Trans-1,2-dichloroethene	BDL	0.3
Chloroform 1,2-Dichloroethane	BDL	0.3
1.2-Dichloroethane	BDL	0.3
2÷Butanonė	BDL	3.0
1,1,1-TrichloroethaneCarbon tetrachloride	BDL	0.3
Cárbon tetrachloride	BDL .	0.3
Vinyl acetate	BDL	1.5
Bromodichloromethane	BDL	0.3
1,2-Dichloropropane Cis-1,3-dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane	BDL	0.3
Cis-1,3-dichloropropene	BDL	0.3
Trichloroethene	BDL	0.3
Dibromochloromethane	BDL	0.3
1,1,2-Trichloroethane	BDL	0.3
		0,3
Trans-1,3-dichloropropane	BDL	0.3
2-Chloroethylvinylether	BDL	0.3
Bromoform	BDL_	<u> </u>
2=Hexanone	BDL	0.3
4-Methyl-2-pentanone	BDL	0.3
4-Methyl-2-pentanone Tetrachloroethene 1,1,2,2-Tetrachloroethane	BDL	0.3
1,1,2,2-Tetrachloroethane	BDL	0.3
Tóluene	BDL	
Chlorobenzene	BDL	0.3
Ethylbenzene	1.3	0.3
Styrene	BDL	0.3
Total xylenes	BDL	0.3

BDL = Below detection limit \*\* = Detected but below reporting limit

Surrogate recoveries, \$
1,2-Dichloroethane-d4 108.8
Toluene-d8 121.2
Bromofluorobenzene 82.0

Date Extracted: 12/8/87 Date Analyzed: 12/8/87

1500

Sample ID: SRM-WP-SG-BD-1, 11/23/87, 1:01pm

#### SW 8240 YOLATILE COMPOUNDS

Compound Name	Concentration ppm, (mg/kg)	Reporting Level ppm, (mg/kg)
Chloromethane	BOL	0.3
Bromomethane	BOL	0.3
Vinyl chloride	BOL	0.3
Chloroethane	BDL	0.3
Dichloromethane	BDL	0.3
Acetone	BDL	3.0
.Carbon disulfide	BDL	0.3
1,1-Dichloroethene	BDL	0.3
1,1-Dichloroethane	BDL	0.3
Trans-1,2-dichloroethene		0.3
Chloroform	BDL	0.3
1,2-Dichloroethane	·BDL	0.3
2-Butanone	BDL	3.0
1,1,1-Trichloroethane	BĎĹ	0.3
Carbon tetrachloride	BDL	0.3
Vinyl acetate	BDL	1.5
Bromodichloromethane	BDL	0.3
1,2-Dichloropropane	BDL	0.3
Cis-1,3-dichloropropene		0.3
Trichloroethene	BÓL	0.3
Dibromochloromethane	BDL	0.3
1,1,2-Trichloroethane	BDL BDL	0.3 0.3
Benzene Trans-1,3-dichloropropane		0.3
2-Chloroethylvinylether	BDL	0.3
Bromoform	BDL	0.3
2-Hexanone	BDL	0.3
4-Methyl-2-pentanone	BDL	0.3
Tetrachloroethene	BDL	0.3
1,1,2,2-Tetrachloroethane		0.3
Toluene	BDL	0.3
Chlorobenzene	BDL	0.3
Ethylbenzene	BDL	0.3
Styrene	BDL	0.3
Total xylenes	BOL	0.3

BDL = Below Detection Limit
\*\* = Detected but below reporting level

Surrogate Recoveries, %
1,2-Dichloroethane-d4 107.2
Toluene-d8 97.2
Bromofluorobenzene 92.0

# APPENDIX E

GROUNDWATER SAMPLE RESULTS

MINALILIUMI IMBURMIURIES, INC.

#### 2804 N. 33rd ST. BOISE, IDAHO 80:03 PHONE 342-5515 AREA CODE 208

#### WATER QUALITY REPORT

#### SAMPLE NUMBER - 8342

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE 10 BOISE, ID 83702 DATE OF COLLECTION -: 11/12/87

TIME OF COLLECTION -:

DATE RECEIVED ---: 11/12/87
DATE REPORTED ---: 12/08/87

SUBMITTED BY -: BRAD SOURCE -: SRM-WP-W-1002 well #/

RESULTS IN MG/1(PPM)	RESULTS IN ORGANISHS/100ml	RESULTS IN ORGANISMS/100ml
BIOCHEMICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, MPN:
CHEHICAL OXYGEN DEHAND:	FECAL STREP BACTERIA:	FECAL COLIFORM, HPN:
RESIDUE NONFILIERABLE —:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS:
OIL & GREASE:		STAPHYLOCOCCUS / gram —:
RESULTS IN MG/L (PPM) UNLESS NOTED		· · · · · · · · · · · · · · · · · · ·
ACIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL:
ALXALINITY:	E P TOXICITY:	RADIUM GA-GB:
APPIONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
AMMONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL,:
BICARBONATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
BORON:	HARDNESS:	SETTLEABLE HATTER:
BROHIDE	NITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE:	NITRITE N:	SULFATE:
CARBONATE:	NITROGEN ORGANIC:	SULFIDE:
CHLORIDE :	nitrogen total kjeldahl ::	SURFACTANT:
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	tainin e lighth:
COLÚR:	PC8;	TEMPERATURE:
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS:	TRIHALOMETHANE:
CYANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
ALUNINUM:	COPPER	SELENIUM
ANTIHONY	GOLD	SILICA ::
ARSENIC	IRON	SILICON
BARIUM	LEAD	SILVER
BERYLLIUM:	HAGNESIUM:	SODIUM
CADMIUM:	MANGANESE	THALLIUM
CALCIUM	HERCURY	TIN
CHRONIUM	HOLYBDENUM	TITANIUN
HEXAVALENT CHRONIUM	NICKEL	VANADIUM
		ZINC
COBALT:	POTASSIUM	ZING

COMMENTS: TETRACHLOROETHYLENE = 0.618

Michael D. HOORE

# ANAI TICAL LABORAT RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT

#### SAMPLE NUMBER - 8580

SPECIAL RESOURCE MANAGEMEN 200 NORTH 4TH ST - SUITE #10 BOISE, ID 83702 SUBMITTED BY -:		DATE OF COLLECTION -: 11/23/8' TIME OF COLLECTION -: DATE RECEIVED: 11/24/8 DATE REPORTED: 12/02/8
SOURCE: SRM-WP-WELL #1		
RESULTS IN MG/1(PPM)	RESULTS IN URGANISMS/100ml	RESULTS IN ORGANISHS/100ml
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, HPN:
CHEMICAL OXYGEN DEMAND:	FECAL STREP BACTERIA:	FECAL COLIFURM, HPN:
RESIDUE NUMFILITERABLE -:	TOTAL COLIFORM BACTERIA -:	PSEUDONONAS
UIL & GREASE:	•	STAPHYLOCOCCUS / gram —:
RESULTS IN HG/L (PPH) UNLESS NOTED		
ACIDITY:	CYANIDE HEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY:	E P TOXICITY:	RADIUM GA-GB:
AMMONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
AMONIA DISTILLED =:	FLUXRIDE DIRECT:	RESIDUE TOTAL:
BICARBONATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
BURON:	HARDNESS:	SETTLEABLE MATTER:
BROHIDE:	NITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE:	HITRITE N:	SULFATE:
CARECHATE:	NITROGEN ORGANIC:	SULFIDE:
CHLORIDE:	HITROGEN TOTAL KJELDAHL -:	SURFACTANT
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANNIN & LIGHIN:
CULÚR:	PCB::	TEMPERATURE:
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS:	TRIHALOMETHANE:
CYANIDE FREE:	pH (S.U.)::	TURBIDITY (M.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
AL ARATARA		
ALUMINUM:	COPPER:	SELENIUM:
ANTIHONY;	60LD::	SILICA:
ARSENIC	IRÔN:	SILICON:
BARIUM:	LEAD:	SILVER:
BERYLLIUM:	MAGNESIUM:	SODIUM
CADMIUM	HANGANESE:	THALLIUM:
CALCIUM:	HERCURY:	TIN:::::::::::::::::::::::::::::::::
CHRONIUM:	HOLYEDENIH	TITANIUM:
HEXAVALENT CHROHIUM:	NICKEL	VANADIUM:
COBALT:	POTASSIUM:	ZINC::

COMMENTS: TETRACHLOROETHYLENE = 1.55

HICHAEL D. HOURE

# ANAI TICAL LABORAT RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8579

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE, ID 83702 SUBMITTED BY -:	•	DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: 3:40 PM DATE RECEIVED: 11/24/87 DATE REPORTED: 12/02/87
SOURCE: SRM-WP-WELL #1C		
RESULTS IN MG/1(PPM)	RESULTS IN ORGANISMS/100ml	RÉSULTS IN ORGANISHS/100ml
BIOCHEMICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	· TOTAL COLIFORM, MPN:
CHEHICAL OXYGEN DEMAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN:
RESIDLE NONFILTERABLE:	TOTAL COLIFORN BACTERIA -:	PSEUDOMONAS:
OIL & GREASE	<del></del>	STAPHYLOCOCCUS / gram:
RESULTS IN MG/L (PPM) UNLESS NOTED		
ACIDITY:	CYANIDE HEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY:	E P TOXICITY:	RADIUM GA-GB
AMMIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
AMMONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL
BICARBONATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE -:
BORON:	HARDNESS:	SETTLEABLE MATTER:
BRUNIDE:	NITRATE N:	STD PLATE COUNT
CARBON DIOXIDE:	NITRITE N:	SUFATE
CARBONATE:	NITROGEN ORGANIC:	SLFIDE
CHLORIDE:	NITROGEN TOTAL KIELDAML -:	SUPPACTANT
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANNIN & LIGHIN
COLOR:	PC8	TEMPERATURE
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS:	TRIHALOMETHANE
CYANIDE FREE	pH (3.U.):	TURBIDITY (N.T.U.)
CYANIDE TOTAL:	PHOSPHATE ORTHO	
ALUMINUM:	COPPER:	SELENIUM:
ANTINOHY	GOLD:	SILICA:
ARSENIC	IRON:	SILICON:
BARIUM	LEAD:	SILVER:
BERYLLIUM:	HAGNESIUM:	SODIUM:
CADRIUM:	MANGANESE:	THALLIUM:
CALCIUM:	HERCURY:	IIN:
CHROHIUM:	HOLYBDENUM:	TITANIUM:
HEXAVALENT CHROHIUM:	NICKEL:	YANADIUM:
CUEALT:	POTASSIUM:	ZINC
		· · · · · · · · · · · · · · · · · · ·

COMMENTS: TETRACHLOROETHYLENE = 2.10

MICHAEL D. MOORE

## ANALYTICAL LABORATORIES, INC.

#### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8543

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE, ID 83702 DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION -: 11:30 AM DATE RECEIVED ----: 11/23/87 DATE REPORTED ----: 12/02/87

SUBMITTED BY -: PAT STOLL SOURCE -: SRM-WP-WELL #4

RESULTS IN HG/1(PPH)	results in Organisms/100ai	RESULTS IN ORGANISMS/100ml
SICCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, HPN:
CHEMICAL OXYGEN DEMAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, MFN:
RESIDUE NONFILTERABLE -:	TOTAL COLIFORN BACTERIA -:	PSELDCHCHAS:
OIL & GREASE		STAPHYLOCOCCUS / gram:
RESULTS IN HG/L (PPH) UNLESS NOTED		
ACIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY:	E P TOXICITY:	RADIUM GA-GB:
AMIONIA DIRECT:	FLUXRIDE DISTILLED:	RESIDUE VOLATILE:
AMMONIA DISTILLED:	FLUGRIDE DIRECT:	RESIDUE TOTAL:
BICARBONATE:	HEFRICIDES:	RESIDUE TOTAL FILTERABLE=:
EÚROH:	HARDNESS:	SETTLEABLE HATTER:
ROMIDE:	NITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE:	NITRITE N:	SUFATE:
CARBONATE:	MITRUGEN DREANIC:	SUFIDE:
CHLORICE :	MITRUGEN TOTAL KJELDAM:	SURFACTANT:
CALURINE RESTRUAL:	oatgen dissolved:	tannin & Librin:
COLOR:	PC3;	TEMPERATURE
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CAFECH:
CORROSIVITY	PHENOLS:	trihalohethane:
CYANIDE FREE:	pH (\$.U.):	TURBIDITY (N.T.U.):
CYANICE TOTAL -:	PHOSPHATE ORTHO:	
ALUMINUM:	COPPER:	SELENTUM:
ANTIMONY:	6U) <del>:</del> :	SILICA:
ARSENIC:	IRON:	SILICON:
BARIUM:	LEAD ************************************	SILVER:
BERYLLIUM -:	HAGTESTUM:	SOOTUM:
CACHIUN:	HANGANEZE:	THALLIUM:
CALCIUM:	MERCURY:	TIN:
CHRONIUM:	MOLYBOERUM:	TITANIUM:
HEXAVALENT CHROHIUM:	NICKEL:	VANADIUM:
CCEALT	POTASSIUM	71\r

COMMENTS: TETRACHLOROETHYLENE = 0.119

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HICHAEL D. HOURE

#### ANALYTICAL LABORATOTIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT

#### SAMPLE NUMBER - 8544

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702

DATE OF COLLECTION -: 11/23/87 TIME OF COLLECTION =: 12:50 PM DATE RECEIVED ---: 11/23/87 DATE REPORTED ---: 12/02/87

SUBMITTED BY -: PAT STOLL

RÉSULTS IN MG/1(PPM)	RESULTS IN ORGANISHS/100ml	RESULTS IN ORGANISMS/100m1
BIOCHENICAL OXYGEN:	FECAL COLIFORN BACTERIA -:	TOTAL COLIFORM, MPN
CHEMICAL DXYSEN DEMAND —:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN
RESIDUE HONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS
DIL & GREASE:		STAPHYLOCOCCUS / graz
RESULTS IN HG/L (PPH) UNLESS HOTED		7 N P P P P P P P
ACIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL
LIVALINITY:	E P TOXICITY:	RADIUM GA-GB
AMMONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE
AMENIA DISTILLED:	FLOURIDE DIRECT:	RESIDUE TOTAL
DICARBONATE:	HEPBICIDES:	RESIDUE TOTAL FILTERABLE
BORCH:	HARDNESS:	SETTLEABLE HATTER
CONTRE:	NITRATE N:	STD PLATE COUNT
ARBON DIOXIDE:	NITRITE N:	SULFATE
CARBONATE:	NITROGEN ORGANIC:	SUFFICE
ALORIDE:	nitrogen total kjeldahl -:	SURFACTANT
MICRINE RESIDUAL:	UXYGEN DISSOLVED:	TANNIN & LIGNIN
COLOR	<b>103</b> :	TEMPERATURE
COMPUCTIVITY:	PESTICIDES:	tòtal organic carbon
DRROSIVITY	PHENOLS:	TRIHALUMETHANE
YANIDE FREE;	pH (S.U.) ————:	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE URTHO:	
		an niti
LUHINM	COPPER:	SELENIUM
WTINONY:	SOLD:	SILICA
RSENIC:	IRON:	STLICON
ARILH ::	LEAD:	STLVER
ERYLLTUN:	MGNESIUM:	SODIUM
ADMIN	MANGALESE:	THALLIUM
ALCIN:	HERCURY:	TIN
HRONIUM:	HOLYBEENDH:	HUINATIT
EXAVALENT CHRONIUM:	HICKEL	KJIOANAY
XXBALT	POTASSIUM:	ZINC:

COMMENTS: TETRACHLOROETHYLENE : 1.40

MICHAEL D. MOURE

#### ANALYTICAL LABORATORIES, INC.

1304 N. 33rd ST. BOISE, IDAHO 83:03 PHONE 342-5515 AREA CODE 208

#### WATER QUALITY REPORT

SAMPLE NUMBER - 9391

DATE OF COLLECTION -: 12/31/87 SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST. - SUITE #10 TIME OF COLLECTION -: DATE RECEIVED ----: 12/31/87 BOISE , ID 83702 DATE REPORTED ----: 01/05/88 SUBMITTED BY -: SOURCE --: SRM-WP-WELL 6d RESULTS IN ORGANISMS/100ml RESULTS IN MG/1(PPM) RESULTS IN ORGANISHS/100ml TOTAL COLIFORM, MPN ---: BIOCHEMICAL OXYGEN ----: FECAL COLIFORM BACTERIA -: FECAL COLIFORM, MPN ----: CHENICAL OXYGEN DEHAND --: FECAL STREP BACTERIA ---: PSEUDOMONAS ---: residue nonfilterable —: TOTAL COLIFORM BACTERIA -: STAPHYLOCOCCUS / gram --: OIL & GREASE ---: RESULTS IN MG/L (PPM) UNLESS NOTED PHOSPHATE TOTAL ----: CYANIDE WEAK ACID DIS --: ACIDITY ---: E P TOXICITY ---: RADIUM GA-68 ----ALKALIHITY ----RESIDUE VOLATILE ---AMMONIA DIRECT ----: FLUORIDE DISTILLED ----: RESIDUE TOTAL ---FLUORIDE DIRECT ----AMMONIA DISTILLED ---: HERBICIDES -RESIDUE TOTAL FILTERABLE-: BICARBONATE ----SETTLEABLE MATTER ---: HARDNESS ----BORON ----BRONIDE ----NITRATE N ----STD PLATE COUNT -NITRITE N -SULFATE ----ARBON DIOXIDÉ ---SULFIDE -CARBONATE ----NITROGEN ORGANIC -----CHLORIDE -HITROGEN TOTAL KJELDAHL -: SURFACTANT ---TANNIN & LIGHTH ---OXYGEN DISSOLVED ---: CHLORINE RESIDUAL ---TEMPERATURE ----PC8 -----COLOR ----TOTAL ORGANIC CARBON ---CONDUCTIVITY ----PESTICIDES ---PHENOLS -CORROSIVITY ----TRIKALOMETHANE ---pH (S.U.) TURBIDITY (N.T.U.) -CYANIDE FREE ---PHOSPHATE ORTHO -CYANIDE TOTAL -COPPER -SELENIUM ---ALUHINUH ---

COMMENTS: TETRACHLOROETHYLENE = 0.022

ANTIHONY ----

ARSENIC ----

CHROHIUM ---

HEXAVALENT CHROHIUM -

COBALT ----

BARIUH ---

CADHTUN -CALCIUM -

BERYLLIUM --

JAN 8 1988

601 D ---

NACHESIUM ----

HANGANESE ----

HOLYBDENUM ----

HICKEL ---POTASSIUM --

SILICA ---

STLICON -

SODIUM -

TITANIUM ----

THALLIUM ----

SILYER ---

- HITTDAHAY

ZINC ----

SRM, INC. / BOISE

### ANALYTICAL LABORATORIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 837u3 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT

#### SAMPLE NUMBER - 9390

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST. - SUITE #10 BOISE , ID 83702

DATE OF COLLECTION -: 12/31/87 TIME OF COLLECTION -: 3:13 PM DATE RECEIVED ---: 12/31/87
DATE REPORTED ---: 01/05/88

SUBMITTED BY -:

ESULTS IN MG/1(PPM)	RESULTS IN ORGANISHS/100ml	RESULTS IN ORGANISHS/100ml
IOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, MPN:
HĒHĪCAL OXYGĒN DEHAND:	FECAL STREP BACTERIA:	FECAL COLIFORM, HPN
ESIDUE NONFILTERABLE:	TOTAL COLIFORM BACTÉRIA -:	PSEUDOMONAS
IL & GREASE:		STAPHYLOCOCCUS / gram
ESULTS IN NG/L (PPN) UNLESS NOTED		
CIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL
LKALINITY:	E P TOXICITY:	RADIUM GA-GB
MMONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE
MACHIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL
ICARBONATE:	HERBICIDES:	residue total filterable-:
ORON	HARONESS:	SETTLEABLE MATTER -
DONIDĒ	HITRATE H	STD PLATE COUNT
ROON DIOXIDE:	NITRITE N:	SULFATE
ARBONATE	NITROGEN ORGANIC:	SUFFICE
HLORIDE	HITROGEN TOTAL KJELDAHL -:	SURFACTANT
HLORINE RESIDUAL:	OXYEEN DISSOLVED:	TANDIN & LIGHIN
OLOR	PO8:	TEMPERATURE
ONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON
DORROSIVITY	PHENOLS:	TRIHALOMETHANE
YANIDE FREE:	pH (\$.U.):	TURBIDITY (N.T.U.)
YANIDE TOTAL:	PHOSPHATE ORTHO:	خدة ها العالم العال في العالم ال
u sairiana	COPPER:	SELENTUM
LUNINA	GOLD	SILICA
ANTIMONY:	IRON	SILICON —
ARSENIC :	LEAD	SILVER
BARIUM:	MAGNESIUM	SODIUM
DERYLLIUM:	NAMESTON	THALLIUM
CADRIUM:	MERCURY	TIN —
CALCIUM:		TITANIUN
CHRONIUM:	HOLYBDENUM:	VANADIUM
HEXAVALENT CHROMIUM:	NICKEL ;	ZINC
COBALT:	POTASSIUM:	TIME

COMMENTS: TETRACHLOROETHYLENE = 0.100

MICHAEL D. MOORE

# ANAL TICAL LABORAT RIES, INC.

## 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT

#### SAMPLE NUMBER - 8545

SPECIAL RESOURCE MANAGEMEN 200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702	· ·	DATE OF COLLECTION -: 11/23/8 TIME OF COLLECTION -: 1:30 PM DATE RECEIVED: 11/23/8	
SUBMITTED BY -: PAT STOLL SOURCE: SRM-WP-WELL #7	•	DATE REPORTED: 12/02/	
RESULTS IN HG/1(PPH)	RESULTS IN ORGANISMS/100ml	RESULTS IN URGANISMS/100mi	
RICCHENICAL OXYGEN =:	FECAL COLIFORM BACTERIA -:	TATAL AM STARL	
CHEMICAL OXYGEN GENAND -:	FECAL STREP BACTERIA	TOTAL COLIFORM, MPN:	
RESIDUE MONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	FECAL COLIFORM, HPM:	
OIL & GREASE	Total State Share, in the state of the state	PSEUDOHOMAS: STAPHYLOCOCCUS / gram:	
RESULTS IN MG/L (PPM) UNLESS NOTED			
ACIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL	
ALKALINITY ————:	E P TOXICITY	RADIUM GA-GS	
AMMONIA DIRECT:	FLUORIDE DISTILLED	RESIDUE VOLATILE	
AMIONIA DISTILLED:	FLUORIDE DIRECT	RESIDUE TOTAL	
BICARBONATE:	HERBICIDES	RESIDUE TOTAL FILTERABLE-	
BORCH	HARDNESS	SETTLEABLE MATTER	
ROMIDE	NITRATE N:	STD PLATE COUNT	
CARBON DIGXIDE:	NITRITE N	SUFATE -	
CARBONATE	NITROGEN ORGANIC:	SULFIDE —	
CHLORIDE	MITROGEN TOTAL KJELDAHL -:	SUFFACIANT -	
CHLORINE RESIDUAL	OXYGEN DISSOLVED:	TANTH & LIGHTH	
CULOR:	PC8:	TEMPERATURE -	
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON	
CORROSTYTTY:	PHENOLS	TRIHALONETHANE	
CYANTEE FREE	pH (S.U.)	TURBIDITY (N.T.U.):	
CYANTOE TOTAL:	PHOSPHATE ORTHO:		
ALUMINUM ———————	O)PPER	CT DITIM -	
ANTIMONY —————;	GCLD	SELENTIA	
ARSENIC:	IRON	STLICON ————	
BARIUM	LEAD	SILVER	
BERYLLIUM	MAGNESIUM	SODIUM	
CADMIUM	MANGANESE -	THALLIUM	
CALCIUM:	HERCURY	TIN —————	
CIRONIUM:	HOLYBDEHUM	TITANTUM	
HEXAVALENT CHROMIUN:	NICKEL	YANGOUN —————;	
COBALT:	POTASSIUM	ZINC	

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#### ANALY TICAL LABORATC TIES, INC.

#### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

#### WATER QUALITY REPORT

#### SAMPLE NUMBER - 8860

SPECIAL	RESOL	JRCE	MANAGE	MENT
200 NORTI	HTP E	ST	- SUITE	#10
BOISE , I	D 8370	)2		

DATE OF COLLECTION -: 12/07/87 TIME OF COLLECTION -: 5:10 PM DATE RECEIVED ----: 12/08/87 DATE REPORTED ----: 12/09/87

SUBMITTED BY -: MARK SOURCE --: SRM-WP WELL 9

RESULTS IN MG/1(PPM)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISHS/100ml
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, MPN:
CHEKICAL OXYGEN DENAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN:
RESIDUE NONFILITERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDONONAS:
OIL & GREASE		STAPHYLOCOCCUS / gram:
RESULTS IN HG/L (PPH) UNLESS NOTED	=	:
ACIDITY:	CYANIDE WEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY:	E P TOXICITY:	RADIUM GA-GB:
AMIONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
AMIONTA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL:
BICARBONATE:	HERBICIDES:	residue total filterable-:
BORON:	HARDNESS:	SETTLEABLE HATTER:
RONIDE:	NITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE:	NITRITE N	SUFATE:
CARBONATE -:	MITROGEN ORGANIC:	SULFIDE:
CHLORIDE:	nitrogen total kjeldahl -:	SURFACTANT:
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANDIN & LIQUIN:
COLOR:	PC8:	TEMPERATURE:
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS:	TRIHALONETHANE
CYANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
	21222	eci cuina
ALUNTNUM:	COPPER:	SELENTUM:
ANTIHONY:	GOLD:	
ARSENIC:	IRON:	STLICON:
BARIUM:	LEAD:	SILVER:
BERYLLTUM:	HAGNESTUM:	
CADHIUM:	MANGANESE	THALLTUN:
CALCIUM :	HERCURY:	TIN:
CHROMIUM:	HOLYBDENEN:	TITANIUM ————:
HEXAVALENT CHRONIUM:	NICKEL:	VANADIUM:
COBALT:	POTASSIUM:	ZING

CONVENTS: TETRACHLORETHYLENE = 1.04

Michael D. MOORE

#### ANAI TICAL LABORAT RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8859

DATE OF COLLECTION -: 12/07/87 SPECIAL RESOURCE MANAGEMENT TIME OF COLLECTION -: 5:00 PM 200 NORTH 4TH ST - SUITE #10 DATE RECEIVED ----: 12/08/87 BOISE , ID 83702 DATE REPORTED ----: 12/09/87 SUBMITTED BY -: MARK SOURCE --: SRM-WP WELL 9B RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISMS/100ml RESULTS IN MG/1(PPH) TOTAL COLIFORM, HPN ---: FECAL COLIFORM BACTERIA -: BIOCHENICAL OXYGEN ---: FECAL COLIFORM, HPN ---: FECAL STREP BACTERIA ---: CHEMICAL OXYGEN DEMAND --: PSELIDOHONAS ----: TOTAL COLIFORN BACTERIA -: RESIDUE NONFILTERABLE -: STAPHYLOCOCCUS / gram ---: OIL & GREASE ----RESULTS IN HG/L (PPH) UNLESS HOTED PHOSPHATE TOTAL ---CYANIDE HEAK ACID DIS ---: ACIDITY ----: RADIUM GA-GB ALXALINITY -----E P TOXICITY ---: RESIDUE VOLATILE ---:
RESIDUE TOTAL ---: AMMONIA DIRECT ----: FLUORIDE DISTILLED ---: AMMONIA DISTILLED -----FLUORIDE DIRECT ---: BICARBONATE -----HERBICIDES ---RESIDUE TOTAL FILTERABLE-: SETTLEABLE HATTER ---: HARDNESS ----BROHIDE ----: STD PLATE COUNT ---NITRATE N ----SUFATE -----CARBON DIOXIDE -----NITRITE H -CARBONATE ---:
CHLORIDE ---: NITROGEN ORGANIC ---: SURFACTANT ---NITROGEN TOTAL KJELDAHL -: CHLORINE RESIDUAL ---: TANDIN & LIGHTH ----OXYGEN DISSOLVED ---: TEMPERATURE ----PC8 ----TOTAL ORGANIC CARBON ---: CONDUCTIVITY ----PESTICIDES ---CORROSIVITY ----TRIHALOMETHANE ---PHENOLS -CYANIDE FREE ----: pH (S.U.) ----TURBIDITY (N.T.U.) ----: PHOSPHATE ORTHO CYANIDE TOTAL ----COPPER ----SELENTUM ----ALUNIAUN ---eorn -----SILICA ----ANTIHONY ----ARSENIC :: IRON -----SILICON -LEAD ----SILVER ----SOOTUM ----HAGNESIUM ----BERYLLIUM -----THALLIUM HANGANESE ----CADRITUM -----CALCIUM ----HERCURY ----TITANIUN -CHROHIUM ----HOLYBDENUM ----VANADIUM -----HEXAVALENT CHRONIUM ----: NICKEL ---

POTASSIUM ----:

COMMENTS: TETRACHLOROETHYLENE = 0.990

COBALT ----

Michael D. HOORE

ZINC ---

#### ANALYTICAL LABORAT RIES, INC.

#### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

#### WATER QUALITY REPORT

#### SAMPLE NUMBER - 8829

SPECIAL RESOURCE MANAGEMENT

COMMENTS: TETRACHLOROETHYLENE = 0.007

200 NORTH ST - SUITE #10 BOISE, ID 83702		TIME OF COLLECTION =: DATE RECEIVED: 12/07/8' DATE REPORTED: 12/08/8
SUBMITTED BY -: SOURCE: SRM-WP-WELL #10		DATE REPORTED 12/00/0
RESULTS IN HG/1(PPM)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISMS/100ml
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA =:	TOTAL COLIFORM, MPN:
CHEMICAL OXYGEN DEMAND —:	FECAL STREP BACTERIA -:	FECAL COLIFORM, HPN:
RESIDUE HONFILTERABLE:	TOTAL COLIFORN BACTERIA -:	PSEUDOHONAS:
OIL & GREASE:	**** <u>*********************************</u>	STAPHYLOCOCCUS / gram:
RESULTS IN NG/L (PPM) UNLESS NOTED		
ACIDITY:	CYANIDE WEAK ACID DIS -:	PHOSPHATE TOTAL:
ALXALINITY:	E P TOXICITY:	RADIUM GA-SB:
AMMONTA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
AMONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL:
BICARBONATE:	HERBICIDES	RESIDUE TOTAL FILTERABLE-:
BORON:	HARDNESS	SETTLEABLE HATTER:
BRONIDE:	NITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE:	NITRITE N:	SUFATE:
CARBONATE ::	HITROGEN ORGANIC:	SUFIDE -:
CHORIDE:	NITROGEN TOTAL KJELDAHL -:	SURFACTANT:
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANKIN & LIGHIN:
COLOR:	POS:	TEMPERATURE:
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS:	TRIHALOPETHANE:
CYANIDE FREE: CYANIDE TOTAL:	pH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL :	PHOSPHATE ORTHO	**************************************
ALUMINUM	COPPER:	STENTIN
ANTIHONY	60LD	SILICA
ARSENIC	IRON	SILICON
	LEAD:	STLVER
BARIUM	MAGNESIUM	SILVER
CADMIUM	MANGANESE	THALLIUM
CALCIUM	MERCURY:	TIN ————
CHROHIUN	HOLYBDENUM	TTTAUTIM
HEXAVALENT CHRONIUM:	HOLYBDENIM:	YANADTUH
COBALT	POTASSTUM	ZINC ———
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Michael Moore DE MICHAEL D. HOORE

DATE OF COLLECTION -: 12/07/87

#### ANALITICAL LABORATURIES, INC.

#### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

#### WATER QUALITY REPORT

#### SAMPLE NUMBER - 8861

SPECIAL RESOURCE MANAGEMENT DATE OF COLLECTION -: 12/07/87 200 NORTH 4TH ST - SUITE #10 TIME OF COLLECTION -: 4:35 PM BOISE , ID 83702 DATE RECEIVED ----: 12/08/87 DATE REPORTED ---: 12/09/87 SUBMITTED BY -: MARK SOURCE --: SRM-WP WELL 11 RESULTS IN HG/1(PPH) RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISMS/100ml BIOCHÉHICAL OXYGEN ----: FECAL COLIFORN BACTERIA -: TOTAL COLIFORM, HPN ----: CHEHICAL OXYGEN DENAND -: FECAL STREP BACTERIA ---: FECAL COLIFORM. MPN ----: RESIDUE NONFILTERABLE ---: TOTAL COLIFORM BACTERIA -: PSEUDOHONAS ----OIL & GREASE ----: STAPHYLOCOCCUS / gras ---: RESULTS IN HG/L (PPH) UNLESS NOTED ACIDITY ---CYANIDE HEAK ACID DIS ---: PHOSPHATE TOTAL --ALKALINITY ----E P TOXICITY ----: RADIUM GA-GB ---AMMONIA DIRECT FLUORIDE DISTILLED ---RESIDUE VOLATILE -AMMONTA DISTILLED -----: RESIDUE TOTAL ---: FLUORIDE DIRECT BICARBONATE ----HERBICIDES ----RESIDUE TOTAL FILTERABLE-: SETTLEABLE MATTER ---:
STD PLATE COUNT ---: BORON ---HARDNESS ----BROMIDE ----NITRATE N ----CARBON DIOXIDE ---: SUFATE ----HITRITE N ----CARBONATE ---:
CHLORIDE ---: NITROGEN ORGANIC ---: SULFIDE -SURFACTANT ----NITROGEN TOTAL KJELDAHL -: CHLORINE RESIDUAL ----: OXYGEN DISSOLVED ----: TANNIN & LIGHIN ---TEMPERATURE ----COLOR ---: PCB ----PESTICIDES ---TOTAL ORGANIC CARBON -CORROSIVITY ----PHENOLS -TRIHALOMETHANE ----CYANIDE FREE ----pH (S.U.) -----TURBIDITY (N.T.U.) ----: PHOSPHATE ORTHO ----CYANIDE TOTAL ----COPPER ----ALUHINUN -----SELENTUM ------ANTIHONY ----ARSENIC ----SILICON ----IRON ----LEAD ----BARIUM ----SILVER ----HAGNESIUM ----SODIUM ----BERYLLIUM ----HANGANESE -CADITUM ----THALLIUN -----TIN ----HERCURY ----CALCIUM ----CHRONIUM ----TITACIUM -----HOLYBDEHUN ----VANADIÚM ----HEXAVALENT CHROHIUM ----: NICKÉL ----

POTASSIUM ----

COMMENTS: TETRACHLOROETHYLENE = 0.005

COBALT ----

Michael D. MOORE

## ANALY CAL LABORATOF ES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

#### WATER QUALITY REPORT

#### SAMPLE NUMBER - 9197

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE, ID 83702 DATE OF COLLECTION -: 12/18/87 TIME OF COLLECTION -: 3:15 PM DATE RECEIVED ----: 12/18/87 DATE REPORTED ----: 12/22/87

SUBMITTED BY -:

SOURCE --: SRM-WP-WELL #1D

RESULTS IN HG/1(PPH)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISMS/100ml
BIOCHENICAL OXYGEN:	FECAL COLIFORN BACTERIA -:	TOTAL COLIFORM, HPN:
CHENICAL OXYGEN DENAND:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN:
RESIDUE HONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSELDOHONAS:
OIL & GREASE :		STAPHYLOCOCCUS / gram:
RESULTS IN HG/L (PPH) UNLESS HOTED		
ACIDITY:	CYANIDE HEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY	E P TOXICITY:	RADIUN GA-GB:
AMONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
AMONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL:
BICARBONATE	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
CORON	HARDNESS	SETTLEABLE MATTER
PROMIDE	HITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE:	NITRITE N:	SULFATE
CARBONATE	NITROGEN ORGANIC:	SUFIDE:
CHLORIDE	nitrugen total kjeldahl -:	SURFACTANT:
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANTIN & LIGHTH:
COLOR:	PO3:	TEMPERATURE
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS	TRIHALONETHANE:
CYANIDE FREE	pH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
		SELENTUN:
ALUNINUM	COPPER:	SILICA
ANTIHONY	60LD:	
ARSENIC:	IRON	SILICON
BARIUM :	LEAD	SILVER
BERYLLIUH	MAGNESIUM	SOOTUM
CADMIUM	HANGANESE:	THALLIUM: TIN:
CALCIUN:	HERCURY:	TITANIUM
CHROHIUM:	MOLYBDENUM:	:
HEXAVALENT CHRONIUM:	NICKEL	YANAUJUN
COBALT:	POTASSIUM	ZINC ———:

COMMENTS: TETRACHLOROETHYLENE = 0.92

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HICHAEL D. HOORE

# ANAL' FICAL LABORATE RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT

SAMPLE NUMBER - 9198

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE, ID 83702		DATE OF COLLECTION -: 12/18/87 TIME OF COLLECTION -: 12:35 PM DATE RECEIVED: 12/18/87 DATE REPORTED: 12/22/87
SUBMITTED BY -: SOURCE: SRM-WP-WELL #5D	422.57	
RESULTS IN HG/L(PPH)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISMS/100ml
SIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, MPN:
CHENICAL OXYGEN DEPAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, HPN:
RESIDUE HONFILTERABLE:	TOTAL COLIFORN BACTERIA -:	PSEUDONONAS:
OIL & GREASE		STAPHYLOCOCCUS / gram:
RESULTS IN HG/L (PPH) UNLESS HOTED		
ACIDITY:	CYANIDE WEAK ACID DIS -:	PHOSPHATE TOTAL:
ALKALINITY	E P TOXICITY:	RADIUM GA-GB:
AMONIA DIRECT	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
AMONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL:
BICARBONATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
BORON	HARDNESS	SETTLEABLE MATTER
BRONIDE	HITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE	NITRITE H:	SUFATE :
CARBONATE :	NITROGEN ORGANIC:	SUFFICE
CHLORIDE:	nitrogen total kjeldahl -:	SURFACTANT
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANIH & LIGHIN:
COLOR:	PC8:	TEMPERATURE
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON —:
CORROSIVITY:	PHENOLS	TRIMUNETHME :
CYANIDE FREE:	PH (S.U.):	TURBIDITY (M.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
		SELENTUN:
ALUNINM:	COPPER	SILICA:
ANTIHONY:	60LD:	SILICON
ARSENIC	IRON:	SILVER
BARIUM:	LEAD:	SOOTUH
SERVILIUM	MAGNESTUM:	THALLIUM:
CADNIUM	MANGANESE	UNITION:
CALCIUM	MERCURY	TITANIUM =:
CHRONIUM:	HOLYBOEKUM:	· MATGANAY
HEXAVALENT CHRONIUM:	NICKEL	ZINC:
COBALT:	POTASSIUM:	4100

COMPENTS: TETRACHLOROETHYLENE = 1.31

Michael Morres B.

## ANAL: ICAL LABORATO IES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

### WATER QUALITY REPORT

SAMPLE NUMBER - 9199

DATE OF COLLECTION -: 12/18/87 SPECIAL RESOURCE MANAGEMENT TIME OF COLLECTION -: 3:00 PM 200 NORTH 4TH ST - SUITE #10 DATE RECEIVED ----: 12/18/87 BOISE , ID 83702 DATE REPORTED ----: 12/22/87 SUBMITTED BY -: SOURCE -: SRM-WP-WELL #7D RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISMS/100ml RESULTS IN NG/1(PPH) TOTAL COLIFORM, HPN ---: FECAL COLIFORN BACTERIA -: BIOCHENICAL OXYGEN ---: FECAL COLIFORM, HPN ---: FECAL STREP BACTERIA ---: CHENICAL OXYGEN DENAND -: PSEUDOHONAS ----TOTAL COLIFORM BACTERIA -: RESIDUE HONFILTERABLE ---: STAPHYLOCOCCUS / gram --: OIL & GREASE ----RESULTS IN MG/L (PPM) UNLESS NOTED PHOSPHATE TOTAL ----CYANIDE HEAK ACID DIS -: ACIDITY ----: RADIUM GA-GB ----ALKALINITY ----E P TOXICITY ---: AMMONIA DÍRECT RESIDUE VOLATILE ---FLUORIDE DISTILLED ----: RESIDUE TOTAL ----: FLUORIDE DIRECT ---: AMONIA DISTILLED ---: RESIDUE TOTAL FILTERABLE -: HERBICIDES ---BICARBONATE ----SETTLEABLE HATTER -: JORON ----HARDNESS ---BRONIDE ---STD PLATE COUNT ---NTTRATE N ---SILFATE ---XITRITE N ----CARSON DIOXIDE ---NITROGEN ORGANIC ---: CARBONATE CHLORIDE SUFFIE -SURFACTANT ----NITROGEN TOTAL XJELDAHL -: TANNIN & LIGHIN ---OXYGEN DISSOLVED ----: CHLORINE RESIDUAL ---TEMPERATURE -PCS ----COLOR -TOTAL ORGANIC CARBON ---: CONDUCTIVITY ----PESTICIDES -TRIHALONETHANE -PHENOLS ---CORROSIVITY --pH (S.U.) CYANIDE FREE TURBIDITY (N.T.U.) ---: PHOSPHATE ORTHO CYANIDE TOTAL -SELECTUM ----COPPER -SILICA ALUNTNUM ----ANTIHONY 60LD ---ARSENIC ----STLICON ----IRON ----LEAD ----SILVER -BARIUM ----SOOTUM -BERYLLIUM -MAGNESTUM ----THALLIUM -HANGAVESE ----CADICUM ---TIN ----MERCURY -CALCIUM ----TITAKUH ----CHROHIUM ----HOLYBDENUM ---VANADIUM ----NICKEL ---HEXAVALENT CHROHIUM -

POTASSIUM ----

CONNENTS: TETRACHLOROETHYLENE = 1.54

MICHAEL D. HOORE

## ANALYTICAL LABORATURIES, INC.

#### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

#### WATER QUALITY REPORT

#### SAMPLE NUMBER - 9200

DATE OF COLLECTION -: 12/18/87 SPECIAL RESOURCE MANAGEMENT TIME OF COLLECTION -: 11:32 AM 200 NORTH 4TH ST - SUITE #10 DATE RECEIVED ----: 12/18/87 BOISE , ID 83702 DATE REPORTED ---: 12/22/87 SUBMITTED BY -: SOURCE -: SRM-WP-WELL #9D RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISMS/100ml RESULTS IN NG/1(PPM) TOTAL COLIFORM, MPN ----: FECAL COLIFORN BACTERIA -: BIOCHENICAL OXYGEN ---: FECAL COLIFORM. HPN ---: FECAL STREP BACTERIA ---: CHEHICAL OXYGEN DEMAND -: PSEUDOMONAS ----TOTAL COLIFORM BACTERIA -: RESIDUE NONFILTERABLE ---: STAPHYLOCOCCUS / gram ---: OTL & GREASE ---RESULTS IN HG/L (PPH) UNLESS NOTED PHOSPHATE TOTAL -CYANTDE WEAK ACID DIS -: ACIDITY ----RADTUM GA-GB ---ALKALINITY ----E P TOXICITY ----RESIDUE VOLATILE -AMONIA DIRECT ----: FLUORIDE DISTILLED -RESIDUE TOTAL ---FLUORIDE DIRECT ---AMONIA DISTILLED -RESIDUE TOTAL FILTERABLE-: HERBICIDES ----BICARBONATE ----SETTLEABLE HATTER ---: HARDHESS -BORON ----STD PLATE COUNT -NITRATE H ---BRONIDE ----SULFATE ---CARBON DIOXIDE ----NITRITE H -CARBONATE -SULFIDE -NITROGEN ORGANIC ---SURFACTANT ---NITROGEN TOTAL KJELDAHL -: CHLORIDE -TANNIN & LIGHIN -OXYGEN DISSOLVED ---: CHLORINE RESIDUAL -TEMPERATURE ----PCB ----COLOR — TOTAL ORGANIC CARBON ---: PESTICIDES ---CONDUCTIVITY ---TRIHALOMETHANE ----PHENOLS -CORROGIVITY -TURBIDITY (N.T.U.) pH (S.U.) ----CYANIDE FREE ---PHOSPHATE ORTHO -CYANIDE TOTAL ----SELENTUM ----COPPER ---ALUNTAUN ---SILICA ---**60LD** --SILICON -ANTIHOHY ---IRON ----ARSENIC --SILVER ---LEAD ---BARIUH -SOOTUN ----BERYLLTUN ----HACKESTUM ---THALLIUM ----HANGANESE -CADMIUM ---TIN -HERCURY ---CALCIUM -TITANIUM ----HOLYBDENUM ---CHROHIUM ----VANADIUM ----KICKEL -HEXAVALENT CHRONIUM --ZINC — POTASSIUM ---

compents: tetrachloroethylene = 1.22

MICHAEL D. HOORE

# ANALY ICAL LABORATOF ES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 9138

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE 310 BOISE, ID 83702 DATE OF COLLECTION -: 12/16/87 TIME OF COLLECTION -: 1:05 PM DATE RECEIVED ----: 12/16/87 DATE REPORTED ----: 12/18/87

SUBMITTED BY -: SOURCE: SRM-WP-WELI		
RESULTS IN HG/1(PPH)	RESULTS IN ORGANISHS/100ml	RESULTS IN ORGANISMS/100ml
BICCHEHICAL OXYGEN: CHENICAL OXYGEN DEMAND -: RESIDUE NONFILTERABLE -: OIL & GREASE:	FECAL COLIFORM BACTERIA -: FECAL STREP BACTERIA: TOTAL COLIFORM BACTERIA -:	TOTAL COLIFORM, HPN: FECAL COLIFORM, HPN: PSEUDOHONAS: STAPHYLOCOCCUS / gram:
results in hg/l (pph) unless hoted		
ACIDITY	CYANIDE NEAK ACID DIS —:  E P TOXICITY ——:  FLUORIDE DISTILLED ——:  FLUORIDE DIRECT ——:  HERBICIDES ——:  HARDNESS ——:  HITRATE N ———:  HITROGEN ORGANIC ——:  HITROGEN TOTAL KJELDAHL —:  OXYGEN DISSOLVED ——:  PCB ———:  PESTICIDES ———:  PHENOLS ———:  PHOSPHATE ORTHO ——:	PHOSPHATE TOTAL
ALLMINUM  ANTIHONY  ARSENIC  BARIUM  BERYLLIUM  CADMIUM  CALCIUM  CHROMIUM  HEXAVALENT CHROMIUM  COBALT	COPPER GOLD IRON IRON LEAD HAGNESIUM HARGNESE HERCURY HOLYBDENUM NICKEL POTASSIUM	SELENIUM

COMMENTS: TETRACHLOROETHYLENE = 1.830

Michel Muse

HICHAEL D. MOORE

#### ANAL FICAL LABORATO MES, INC.

#### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

### WATER QUALITY REPORT

SAMPLE NUMBER - 9161

DATE OF COLLECTION -: 12/17/87 SPECIAL RESOURCE MANAGEMENT TIME OF COLLECTION -: 11:10 AM 200 NORTH 4TH ST - SUITE #10 DATE RECEIVED ----: 12/17/87 BOISE , ID 83702 DATE REPORTED ----: 12/18/87 SUBMITTED BY -: SOURCE --: SRM-WP-WELL #13 RESULTS IN ORGANISMS/100mi RESULTS IN MG/1(PPM) RESULTS IN ORGANISMS/100ml TOTAL COLIFORM, HPN ----: FECAL COLIFORM BACTERIA -: BIOCHEHICAL OXYGEN ---: FECAL COLIFORM, HPN ----: FECAL STREP BACTERIA ---: CHEHICAL OXYGEN DEHAND --: PSEUDOHONAS ---: TOTAL COLIFORN BACTERIA -: RESIDUE NONFILTERABLE --: STAPHYLOCOCCUS / gram ---: DIL & GREASE ---: RESULTS IN HG/L (PPH) UNLESS NOTED PHOSPHATE TOTAL --: CYANIDE HEAK ACID DIS ---: ACIDITY ----RADIUM GA-GB ----: ALKALINITY ----: E P TOXICITY ----: RESIDUE VOLATILE ----: AMMONIA DIRECT ----: FLUORIDE DISTILLED ----: RESIDUE TOTAL ---: FLUORICE DIRECT ----: AMMONIA DISTILLED ---: BICARBONATE ----: HERBICIDES ----: RESIDUE TOTAL FILTERABLE-: SETTLEABLE MATTER ----: HARDNESS ----: BROMIDE ----: STD PLATE COUNT ----: NITRATE N ----: SULFATE ----: CARBON DIOXIDE ---:
CARBONATE ---: NITRITE N ---: SULFIDE ----NITROGEN ORGANIC ----: SURFACTANT -CHERITE ----NITROGEN TOTAL KJELDAHL -: TANNIN & LIGHIN ----: OXYBEN DISSOLVED ----: CHLURINE RESIDUAL ---: TEMPERATURE ----PCE ----CÚLÚR ----: TOTAL ORGANIC CARBON ----: CONDUCTIVITY ----: PESTICIDES ----CORPOSIVITY ---: TRIHALOMETHANE ----PHENOLS ----pH (S.U.) -----TURBIDITY (M.T.U.) ----: CYANIDE FREE ----: PHOSPHATE ORTHO ----: CYANIDE TOTAL ---: COPPER ----: ALUMINAM ----:
ANTIHONY ----: GOLD ----SILICON ----IRON ----ARSENIC ----: LEAD ----STLVER -BARIUM -----SODIUM ----: BERYLLIUM -----MAGNESIUH ----HANGANESE : CACHIUM -----HERCURY ----CALCIUM -----TITANIUM -----CHRONIUM -----HOLYBOEHUN ----YANADIUM ---NICKEL ----HEXAVALENT CHROHIUM ---:

POTASSIUM ----

COMMENTS: TETRACHLOROETHYLENE = 1,250

COBALT ----

mile Porcone

## ANAL FICAL LABORATO MES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 9201

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE, ID 83702 DATE OF COLLECTION -: 12/18/87
TIME OF COLLECTION -: 3:27 PM
DATE RECEIVED ----: 12/18/87
DATE REPORTED ---: 12/22/87

SUBMITTED BY =:

SOURCE --: SRM-WP-WELL #12D

RESULTS IN HG/1(PPH)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISMS/100ml
IOCHENICAL OXYGEN:	FECAL COLIFORN BACTERIA -:	TOTAL COLIFORM, HPH:
HENICAL OXYGEN DENAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, HPN:
ESIDLE NONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS:
ET 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	IAME AND AND PROPERTY.	STAPHYLOCOCCUS / gram:
OIL & GREASE:		
ESULTS IN NG/L (PPH) UNLESS NOTED	•	
CIDITY	CYANIDE HEAK ACID DIS:	PHOSPHATE TOTAL:
LKALINITY	E P TOXICITY:	RADIUM GA-GB:
WHONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
WHOMIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL:
	HERBICIDES	RESIDUE TOTAL FILTERABLE-:
TICARBONATE:	HARDNESS:	SETTLEABLE MATTER:
RONIDE	HITRATE N	STD PLATE COUNT:
MATIN:	NITRITE N ————	STEATE
ARSON DIOXIDE:	NITROGEN ORGANIC:	SIFIDE:
CARBONATE:	HITROGEN TOTAL KJELDAHL -:	SUFACTANT:
HORIDE	OXYGEN DISSOLVED	TANKIN & LIGHIN
CHLORINE RESIDUAL:	POS	TEMPERATURE
XXLOR	PESTICIDES:	TOTAL ORGANIC CARBON:
CONDUCTIVITY:	PHENOLS	TRINALORETHANE
CORROSIVITY:	MENUS	TURBIDITY (N.T.U.):
CYANEDE FREE	pH (S.U.)	(Marsell furnish)
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
		SELENIUM:
ALUNINUM:	COPPER:	SILICA:
NATINONY:	GOLD:	SILICA
ARSENIC	IRON:	SILVER
BARĪUN:	LEAD:	SODIUM
BERYLLIUM:	MAGNESIUM	SOUTH
CADHIUN	HHENESE	THALLIUM:
CALCIUM	HERCURY:	TIN:
CHRONIUM:	HOLYBDEHUN:	TITAKIM:
HEXAVALENT CHRONIUM:	NICKEL:	· · · · · · · · · · · · · · · · · · ·
COBALT	POTASSIUM:	ZINC =:

COMPENTS: TETRACHLOROETHYLENE = 1.51

Michael D. MORE

### ANALIFICAL LABORATORIES, INC.

### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

### WATER QUALITY REPORT

### SAMPLE NUMBER - 9202

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE #10 BOISE, ID 83702		DATE OF COLLECTION -: 12/18/87 TIME OF COLLECTION -: 1:30 PM DATE RECEIVED: 12/18/87 DATE REPORTED: 12/22/87
SUBMITTED BY -: SOURCE: SRM-WP-WELL #13D	. • <u>-</u>	•
RESULTS IN MG/1(PPM)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISMS/100ml
BIOCHENICAL OXYGEN:	FECAL COLIFORN BACTERIA -:	TOTAL COLIFORM, HPN:
CHEMICAL OXYGEN DEPAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, NPH:
RESIDUE HONFILTERABLE -:	TOTAL COLIFORN BACTERIA -:	PSELDOMONAS:
OIL & GREASE		STAPHINLOCOCCUS / gram:
RESULTS IN HG/L (PPH) UNLESS HOTED		
ACIDITY:	CYANIDE HEAK ACID DIS —:	PHOSPHATE TOTAL:
ALKALINITY	E P TOXICITY:	RADIUM GA-GB
AMONIA DIRECT	FLUORIDE DISTILLED:	RESIDUE VOLATILE
APPIONIA DISTILLED ===:	FLUORIDE DIRECT:	RESIDUE TOTAL:
BICARBONATE ::	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
BORON	HARONESS:	SETTLEABLE NATTER:
BROVIDE	HITRATÉ N:	STD PLATE COUNT:
CARBON DIOXIDE	HITRITE N:	SALFATE:
CARBONATE :	NETROGEN ORGANIC:	SUFIDE:
CHORIDE	HITROGEN TOTAL KJELDAHL -:	SURFACTANT
CHLORINE RESIDUAL:	OXYBEN DISSOLVED:	TANNIN & LIGHIH:
COLOR:	PC8:	TEMPERATURE:
CONDUCTIVITY:	PESTICIDES	TOTAL ORGANIC CARBON:
CORROSIVITY	PHENOIS	TRIHALOVETHANE:
CYANIDE FREE	pH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
ALIMINAN:	COPPER:	SELENTUM:
ANTIHONY:	60L):	SILICA:
ARSENIC:	IRON:	SILICON
BARIUN:	LEAD:	SILVER:
BERYLLTUH:	NAGNESTUM:	SOOTUN
CADITUM:	MANGANESE:	THALLIUM:
CALCIUM	MERCURY:	TIN:
CHROKIUM:	HOLYBDENIN:	TITANIUM:
HEXAVALENT CHRONIUN:	NICKEL:	YAHADIUM:
COBALT	POTASSIUM:	21NC:

COMMENTS: TETRACHLOROETHYLENE = 1.14

MICHAEL D. HOORE

#### PHONE 342-5515 AREA CODE 208

#### WATER QUALITY REPORT

#### 130 SAMPLE NUMBER -

SPECIAL RESOURCE MANAGEMEN 200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702		DATE OF COLLECTION -: 01/08/88 TIME OF COLLECTION -: 11:52 DATE RECEIVED: 01/08/88 DATE REPORTED: 01/20/88
SUBMITTED BY -: SOURCE: SRM-WP-WELL 11F	(pirge witer)	
RESULTS IN HG/1(PPH)	RESULTS IN ORGANISHS/100ml	RESULTS IN ORGANISMS/100ml
BIOCHENICAL OXYGEN: CHENICAL OXYGEN DEMAND: RESIDUE NONFILTERABLE: OIL & GREASE:	FECAL COLIFORM BACTERIA -: FECAL STREP BACTERIA: TOTAL COLIFORM BACTERIA -:	TOTAL COLIFORM, NPM: FECAL COLIFORM, NPM: PSEUDOMONAS: STAPHYLOCOCCUS / gram:
results in NG/L (PPM) unless noted		
ACIDITY  ALXALINITY  AMMONIA DIRECT  BICARBONATE  BORON  BROHIDE  CARBON DIOXIDE  CARBONATE  CHLORIDE  CHLORIDE  COLOR  CONDUCTIVITY  CYANIDE FREE  CYANIDE TOTAL	CYANIDE HEAK ACID DIS -: E P TOXICITY	PHOSPHATE TOTAL  RADIUM GA-G8  RESIDUE VOLATILE  RESIDUE TOTAL  RESIDUE TOTAL FILTERABLE:  SETTLEABLE MATTER  STD PLATE COUNT  SULFATE  SULFATE  SULFATE  SULFATE  TANNIN & LIGNIN  TEMPERATURE  TOTAL ORGANIC CARBON  TRIHALOMETHANE  TURBIDITY (N.T.U.)

COMMENTS: TETRACHLOROTHYLENE = 0.003 PPM 1,1,1-TRICHLOROETHANE = 0.002 PPM

- 1

ALUHINUM ----

ANTIHONY ----

BARTUM ----

BERYLLIUM -

CADHIUM ---

CALCIUM -

CHRONIUM ----

HEXAVALENT CHROHIUM -

COBALT ----

ARSENIC -



COPPER ---

GOLD ----

IRON ----

LEAD ---

MAGNESIUM ---

HANGANESE -

HOLYBOENUM ---

NICKEL ----

POTASSIUM ---

HERCURY -

mil Innum.

SELENIUM ---

SILICA ----

SILICON -

SILVER ----

SODIUM -

THALLIUM -

TITANIUM ---

VANADIUM -

TIN ---

# ANAL' FICAL LABORATC MES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

#### WATER QUALITY REPORT SAMPLE NUMBER -243

SPECIAL R	ESOURCE	MANAGE	MENT
200 NORTH	4TH ST -	- SUITE	#10
BOISE , ID		=	

DATE OF COLLECTION -: 01/13/88 TIME OF COLLECTION -: 2:20 PM DATE RECEIVED ----: 01/13/88 DATE REPORTED ---: 01/21/88

SOURCE -: SRM-WP-WELL # 14

PERSONAL THE AND TALLED.		RESULTS IN ORGANISMS/100e1		
BIOCHEHICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, MPN:		
CHEMICAL OXYGEN DEMAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, HPN:		
RESIDUE NONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS		
OTL & GREASE:		STAPHYLOCOCCUS / gram:		
RESULTS IN MG/L (PPM) UNLESS NOTED		**************************************		
ACIDITY:	CYANIDE WEAK ACID DIS -:	PHOSPHATE TOTAL:		
ALXALINITY:	E P TOXICITY:	RADIUM GA-GB		
AMMONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE		
AMMONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL		
BICARBONATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:		
:	HARDNESS:	SETTLEABLE MATTER:		
MONIDE	NITRATE N:	STD PLATE COUNT:		
CARBON DIOXIDE:	NITRITE N:	SUFATE:		
CARBONATE:	HITROGEN ORGANIC:	SUFIDE		
CHLORIDE	NITROGEN TOTAL KJELDAHL -:	SURFACTANT		
CHLORINE RESIDUAL:	OXYGEN DISSOLYED	TANNIN & LIGNIN:		
COLOR:	PC8;	TEMPERATURE:		
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:		
CORROSIVITY:	PHENOLS:	trihalohethane:		
CYANIDE FREE:	pH (S.U.) —:	TURBIDITY (N.T.U.):		
CYANIDE TOTAL:	PHOSPHATE ORTHO:			
ALUMINON —————:	COPPER	SELENIUM:		
ANTIHONY ———	600)	SILICA		
ARSENIC	IRON	SILICON		
BARIUM	LEAD	SILVER:		
BERYLLIUM	HAGNESIUM	SODIUM		
CADHIUM	NANGANESE	THALLIUM		
CALCIUM	HERCURY	IIN		
CHRONIUM —————	HOLYBDEHLM	TITANIUM		
HEXAVALENT CHRONIUM:	NICKEL	VANADIUM		
COBALT	POTASSIUM	ZINC		
	rotasson;	LINC		

COMMENTS: TETRACHLOROETHYLENE = (2.0 PPB 1,1.1-TRICHLOROETHANE = TRACE

HETHYLENE CHLORIDE = TRACE

\*TRACE = (1.0

MICHAEL D. MOORE

# ANAL FICAL LABORATO RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 240

SPECIAL R	ESOURCE	MANAGE	MENT
200 NORTH	4TH ST -	- SUITE	#10
BOISE , ID	83702		

DATE OF COLLECTION -: 01/13/88 TIME OF COLLECTION -: 12:15 PM DATE RECEIVED -----: 01/13/88 DATE REPORTED ----: 01/21/88

SUBMITTED	BY -:	
SOURCE:	SRM-WP-WELL	#15

RESULTS IN MG/1(PPM)	RESULTS IN ORGANISMS/100ml	RESULTS IN URGANISMS/100ml
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFURM, HPN:
CHENICAL OXYGEN DEMAND:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN:
RESIDUE NONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS
OIL & GREASE	· · · · · · · · · · · · · · · · · · ·	STAPHYLOCUCCUS / gram:
RESULTS IN MG/L (PPM) UNLESS NOTED		on incooded y gram .
ACIDITY:	CYANIDE HEAK ACID DIS:	PHOSPHATE TOTAL:
ALKALINITY	E P TOXICITY	-
APHONIA DIRECT	FLUORICE DISTILLED:	RADIUM GA-GB
AMMONIA DISTILLED:	FLUORIDE DIRECT	RESIDUE VOLATILE:
BICARBONATE	HERBICIDES	RESIDUE TOTAL:
BURON	HARDNESS	RESIDUE TOTAL FILTERABLE-:
BROHIDE	HITRATE N	SETTLEABLE MATTER:
CARBON DIOXIDE	NITRITE N	STD PLATE COUNT:
CARBONATE		SUFATE:
HORICE	NITROGEN ORGANIC:	SUFIDE:
CHLORINE RESIDUAL	NITROGEN TOTAL KJELDAHL -:	SURFACTANT:
OLOR:	OXYGEN DISSOLVED:	TANNIN & LIGNIN:
DABUCTIVITY	PC8:	TEMPERATURE:
	PESTICIDES:	TOTAL ORGANIC CARSON:
CORROSIVITY:	PHENOUS:	TRIHALOMETHANE:
CYANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
ALUMINUM	COPPER	AT FULL
NTIHONY	60LD	SELENIUM:
RSENIC	IRON	SILICA:
ARIUM	LEAD	STLICON:
ERYLLIUM —————	MAGNESIUM	SILVER:
ADMIUM	NANGANESE	SODIUM:
ALCIUM	HERCURY	THALLIUM:
HROHIUM:		TIN:
•	HOLYBDENUM:	TITANIUM:
EXAVALENT CHROHIUM:	NICKEL	. VANADTUM:
OBALT:	POTASSIUM:	ZINC:

COMMENTS: TETRACHLORETHYLENE = 70.0 PPB P,M.O-DICHLOROBENZENE = TRACE

TRICHLOROETHYLENE = TRACE \*TRACE = (1.0

MEChael D. HOORE

# ANAL TICAL LABORAT RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

### WATER QUALITY REPORT SAMPLE NUMBER -241

200 NORTH 4TH ST - SUITE # BOISE , ID 83702  SUBMITTED BY -: SOURCE: SRM-WP-WELL #16	10	DATE OF COLLECTION -: 01/13/88 TIME OF COLLECTION -: 11:20 AM DATE RECEIVED: 01/13/88 DATE REPORTED: 01/21/88
RESULTS IN HG/1(PPH)	RESULTS IN ORGANISHS/100ml	RESULTS IN ORGANISMS/100ml
BIOCHENICAL OXYGEN: CHENICAL OXYGEN DEMAND: RESIDUE NONFILTERABLE: OIL & GREASE:	FECAL COLIFORM BACTERIA -: FECAL STREP BACTERIA -: TOTAL COLIFORM BACTERIA -:	TOTAL COLIFORM, MPN: FECAL COLIFORM, MPN: PSEUDOMONAS: STAPHYLOCOCCUS / gram -:
RESULTS IN HG/L (PPH) UNLESS HOTED		· · · · · · · · · · · · · · · · · · ·
ACIDITY  ALKALINITY  AMMONIA DIRECT  AMMONIA DISTILLED  BICARBONATE  BORON  CARBON DIOXIDE  CARBON DIOXIDE  CARBONATE  CHLORIDE  CHLORIDE  COLOR  COMBUCTIVITY  CYANIDE FREE  CYANIDE TOTAL	CYANIDE HEAK ACID DIS -: E P TOXICITY	PHOSPHATE TOTAL  RADIUM GA-GB  RESIDUE VOLATILE  RESIDUE TOTAL  RESIDUE TOTAL FILTERABLE  SETTLEABLE MATTER  STD PLATE COUNT  SULFATE  SULFATE  SULFATE  SULFIDE  SURFACTANT  TANNIN & LIGNIN  TEMPERATURE  TOTAL ORGANIC CARBON  TRIHALOMETHANE  TURBIDITY (N.T.U.)
ALCHINUM	COPPER	SELENIUM: SILICA: SILICON: SILVER:

MAGNESIUM ---

HERCURY ----

HOLYBDENUM ---

POTASSIUM ----

NICKEL ---

HANGANESE ---:

COMMENTS: TETRACHLORETHYLENE : 13.0 PP8

\*TRACE = (1.0

CADRIUM

CALCIUM -

CHRONIUM ----

HEXAVALENT CHROHIUM ---:

METHYLENE CHLORIDE = TRACE

HICHAEL D. HOORE

SODIUM ---

THALLIUM -

TIN ----

TITANIUM ----

VANADIUM ----

ZINC -

### ANAL' FICAL LABORATO RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT

SAMPLE NUMBER - 242

DATE OF COLLECTION -: 01/13/88 SPECIAL RESOURCE MANAGEMENT TIME OF COLLECTION -: 2:55 PM 200 NORTH 4TH ST - SUITE #10 DATE RECEIVED ----: 01/13/88 BOISE , ID 83702 DATE REPORTED ----: 01/28/88 SUBMITTED BY -: SOURCE --: SRM-WP-WELL #17 RESULTS IN ORGANISMS/100al RESULTS IN URGANISMS/100ml RESULTS IN MG/1(PPM) TOTAL COLIFORM, MPN ----: FECAL COLIFORM BACTERIA -: BIOCHEMICAL OXYGEN ----: FECAL COLIFORM, MPN ----: FECAL STREP BACTERIA ---: CHEHICAL OXYGEN DEMAND -: PSEUDOHONAS ----: TOTAL COLIFORM BACTERIA -: RESIDUE NONFILTERABLE -: STAPHYLOCOCCUS / gram ---: OIL & GREASE ----RESULTS IN HG/L (PPH) UNLESS NOTED PHOSPHATE TOTAL ---: CYANIDE WEAK ACID DIS ---: ACIDITY ----: RADIUM GA-G8 -----ALXALINITY ----: E P TOXICITY ---: RESIDUE VOLATILE ----: AMMONIA DIRECT ----: FLUORIDE DISTILLED ----: RESIDUE TOTAL FLUORIDE DIRECT ----: AMMONIA DISTILLED ----: HERBICIDES ----: BICARBONATE ---: RESIDUE TOTAL FILTERABLE-: CONTICE ----HARDNESS -----SETTLEABLE MATTER ---: NITRATE N -----STD PLATE COUNT ----: SULFATE ---: CARBON DIOXIDE ---: NITRITE N ----: CARBCHATE ----:
CHLORIDE ----SULFIDE ----: NITROGEN ORGANIC ---: SURFACTANT ----: NITROGEN TOTAL KJELDAML -: TANNIN & LIGNIN ----CHLORINE RESIDUAL ----: OXYGEN DISSOLVED ---: TEMPERATURE ----: PC8 ----PESTICIDES ---::
PHENOLS ---::
ph (s.u.) ---: TOTAL ORGANIC CARBON ----: CONDUCTIVITY ----TRIHALOMETHANE ---: CORROSIVITY ---: TURBIDITY (N.T.U.) ----: CYANIDE FREE ---: CYANICE TOTAL ---: PHOSPHATE ORTHO ----: COPPER ----SELENIUM ----: :------ANTIMONY ------SILICA ----: IRON ----SILVER ----LEAD ----BARIUM ----: BERYLLIUM ----HAGNESIUM ----::
MANGANESE ----: SOUTUM ----CADHIUH ----: TIN ----CALCIUM ---: HERCURY ----TITANIUH ----: HOLYBDENUM -----VANADIUM -----HECAVALENT CHRONIUM ----: COBALT -----POTASSIUM ---

COMMENTS: TETRACHLOROETHYLENE = 1,160.0 PP8

TRICHLOROETHYLENE = 12.0 PPB

Michael D. HOURE



# **SERCO Laboratories**



1931 West County Road C2, St. Paul. Minnesota 55113 (612) 636-7173

JAN 21 1988

SRM, INC. / BOISE

1.2

LABORATORY ANALYSIS REPORT NO: 01/20/88

ο4

PAGE 1

Special Resource Management 200 North Fourth, Suite 206

DATE COLLECTED: DATE RECEIVED:

01/13/88 01/14/38

Boise, ID 83702

COLLECTED BY: PICKED UP AY:

CLIENT CLIENT

Mr. Brad Harr

SAMPLE TYPE:

WATER SOIL

						BHONS
	SERCO SAMPLE NO:	1158	1178	1153	1198	1208
•	SAMPLE DESCRIPTION:	SRM-VP-	WĒĻĻ	WELL	WELL	<b>\_5</b> -25
•	.1	WELL	15A	1óA	17A	
	В.Н	W148 (i.)				
nzene, ug/L		<1.0	<1.0	<1.0	<1.0	-
romoform, ug/L		<6.0	<6.0	<á.0	<6.0	-
romometnane, uz/L		<20	<20	<20	<20	-
omedichloromethane,	ug/L	<2.0	<2.0	<2.0	<2.0	-
rb tetrachloride,	ug/L	<3.0	<3.3	<3.0	<3.0	-
loropenzene, ug/L		<1.0	<1.3	<1.0	<1.0	-
loroetnane, ug/L		<5.3	<b>&lt;5.</b> 0	<5.J	<5.0	-
Chloroethylvinyl et	her, ug/L	<10	<10	<10	<10	-
loroform, ug/L		<1.0	<1.0	<1.0	<1.0	-
loromethane, ug/L		<6.0	<6.0	<6.0	<5.0	-
ibromocaloromethane,		<2.0	<2.0	<2.0	<2.0	-
2 Dicalorobenzene,		<2.3	<2.0	<2.0	42.0	-
3 Dichlorobenzene,		<2.0	ر2.5	<2.0	<b>&lt;2.0</b>	=
,4 Dichlorobenzene,		<2.0	<2.0	<2.0	<2.0	_
1 Dichloroethane, u	s/L	<2.0	<2.0	<2.0	<2.0	-
.2 Dichloroethane, u		<2.0	<2.0	<2.0	<2.0	_
1 Dicaloroethylene,	սց/Լ	<2.0	<2.0	<2.0	(2.0	<b>=</b>
2 Dichloroethylene,	trans, ug/L	<1.0	<1.0	<1.0	4.5	
-2 Dichloropropane, (	ug/L	<2.0	<2.0	<2.0	<2.0	-
3 Dichloro-1-propyle	ene, trans, ug/L	<2.0	<2.0	<2.0	<2.0	-
3 Dichloro-1-propyle	ene, cis, ug/L	<1.0	<1.0	<1.J	<1.0	•
nylbenzene, ug/L		<2.0	<2.0.	<2.0	<2.3	-
chylene chloride, ug	g/L	<9.0		. <9.3	(9.0	-
1,2,2 Tetracoloroeta	nane, uz/L	<3.0	<3.0	<3.0	26	-
		-	_	•	<b>→</b> ▼	



< means "not detected at this level".</pre>

1 ag = 1000 ug.



1931 West County Road C2. St. Paul. Minnesota 55113 (612) 636-7173

LABORATORY ANALYSIS REPORT NO: 01/20/88

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PAGE

SERCO SA SAMPLE DESC ALYSIS:	MPLE NO: 116 CRIPTION: SRM-W WELL 147 (	P- WELL 15A	1168 Well 16a	1198 Well 17a	120ა 5 <del>-</del> 25
· · · · · · · · · · · · · · · · · · ·			-	****	*******
strachloroethylene, ug/L	<1.0	35	14	2100	
Luene, ug/L	<1.0	<1.0	<1.0	<1.0	-
1,1 Trichloroethane, ug/L	<1.0	<1.0	<1.U	<1.0	-
1,2 Trichloroethane, ug/L	<1.0	<1.0	<1.0	<1.0	•
ichloroethylene, ug/L	<1.0	<1.0	۲1.0	13	-
ichlorofluoromethane, ug/L	<1.0	۲۱.۵	<1.0	<1.0	يف
nyl chloride, ug/L	<6.J	<6.0	₹6.0	<6.0	
rolen, ug/L	< 100	< 100	<100	<b>&lt;100</b>	_
rylemitrile, ug/L	<10	<10	<b>&lt;10</b>	<10	<b>=</b>
nzena, ug/ka	-	<b>-</b>	•	•	<2.0
wodichloromethane, ug/kg	•	-	-	<b></b>	<20
omoform, ug/kg	-	-	-	_	<30
omomethane, ug/kg	•	-	-	-	<100
roon tetrachloride, ug/kg	-	-	-	-	<5.0
iorobenzene, ug/kg	-	-	<b>÷</b>	40	<3.0
.oroethane, ug/kg	-	•		•	<11
Chloroethylvinyl etner, ug/kg	-	**	<b>~</b>	-	<30
loroform, ug/kg	-	-	-	-	<2.0
.oromethane, ug/kg	-	÷	-	-	<25
romocnloromethane, ug/kg	-	-	•	•	<14
2 Dichlorosenzene, ug/kg	•	••	-	-	<4.0
3 Dichlorobenzene, ug/kg	-	***	-	_	<4.0
4 Dichlorobenzene, ug/kg	-	-	-	-	<4.0
1 Dichloroethane, ug/kg	-	<b>-</b>	-	-	(5.0



# **SERCO Laboratories**

1931 West County Road C2. St. Paul, Minnesota 55113 (612) 636-7173

LABORATORY ANALYSIS REPORT NO: 01/20/85

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SERCO SAMPLE N SAMPLE DESCRIPTION	1100 SRM-WP- WELL 143 (A) 14 A	1178 WELL 15A	1188 Wâll 15a	1 198 Well 17a	120à 5~25
.2 Dichloroethane, ug/kg	 -	******			<6.0
1 Dichloroethylene, ug/kg	-	-	-	-	<2.0
;2 Dichloroethylene, trans, ug/kg	-	-	-	-	<2.0
2 Dichloropropane, ug/kg	-	•	•	-	<5.0
3 Dichloro-1-propylene, čiš, už/kš	•	-	-	-	<b>&lt;11</b>
3 Dichloro-1-propylene, trans, ug/kg	-	-	-	-	<3.0
ny nzene, ug/kg	-	-	-ā	-	<4.0
sthylene chloride, ug/kg	<del>-</del>	<del></del>	-	-	<b>&lt;25</b>
.1,2,2 Tetracoloroethane,	•	-	-	-	<13
.:racolorgethylene, ug/kg	-	-	-	-	<2.0
Luene, ug/kg	-	-		-	<2.0
1,1 Trichloroethane, ug/kg	ē	-	-	-	<3.0
ichloroethylene, ug/kg	-	-	<b>=</b>	-	<1.0
ichlorofluorometnane, ug/kg	•	-	-	-	<1.0
nyl onloride, ug/kg	-	-	=	-	<10
1,2 Tricaloroethane, ug/kg	-	-	-	••	<7.0
rolein, us/kg	•	-	<b>-</b>	-	<800
rylonitrile, ug/kg	-	-	-	-	<230

< means "not detected at this level". 1 mg = 1000 ug.



1931 West County Road C2. St. Paul. Minnesota 55113 (612) 636-7173

LABORATORY ANALYSIS REPORT NO: 01/20/86

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PAGE

SERCO SAMPLE NO: 1218 'SAMPLE DESCRIPTION: SRM-WP S-24A

#### !ALYSIS:

inzene, ug/kg	<2.0
omodicaloromethane, uz/kg	<b>&lt;20</b>
enoform, ug/kg	<30
romomethane, ug/kg	<100
rbon tetrachloride, ug/kg	<b>45.0</b>
Dilorobenzene, ug/kg	<3.0
1000ethane, ug/kg	<b>&lt;</b> 11
Claroethylvinyl ether, ug/kg	<30
hloroform, ug/kg	<2.0
`loromethane, ug/kg	<25
_bromocaloromethane, ug/kg	<14
.2 Dicalorobenzene, ug/kg	<4.0
ુ3 Dichlorobenzene, ug/kg	<4.0
4 Dichlorobenzene, ug/kg	<4.0
,1 Dichloroethane, ug/kg	<5.J
2 Dichloroethane, ug/kg	<6.0
,1 Dichloroethylene, uz/kg	<2.0
2 Dichloroethylene, trans, ug/kg	<2.0
.2 Dichloropropane, ug/kg	<b>&lt;5.0</b>
.3 Dichloro-1-propylene, cis, ug/ka	<11
3 Dichloro-1-propylene, trans, ug/kg	<3.0
thylbenzene, ug/kg	<4.0
thylene chloride, ug/kg	<b>&lt;25</b>

St. Paul Michesota • Cestar Filippi dwa

1931 West County Road C2. St. Paul. Minnesota 55113 (612) 636-7173

IALYSIS:

ug/kg

·ug/kg

cluene, ug/kg

inyl chloride, ug/kg

-rylonitrile, ug/kg

rolein, ug/kg

.1,2 Trichloroethane, ug/kg

:OK TROTAS EIEVLANA YNCTAROGAL 01/20/88

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SERCO SAMPLE NO: 1218 SAMPLE DESCRIPTION: SRM-AP 5-24A .1,2,2 Tetrachloroethane, <13 Etracoloroethylene, ug/kg 28 <2.0 1,1 Trichloroethane, <3.0 richloroethylene, ug/kg <1.0 io rofluoromethane, ug/kg <1.0

All analyses were performed using EPA or other recognized methodologies.

<10

<7.0

KÕÕÕ

<230

Report submitted by,

Project Manager

< means "not detected at this level".</p> 1 mg = 1000 ug.



### IL. 10 DEPARTMENT OF HEALTH AN. JELFARE BUREAU OF LABORATORIES 2220 Old Penitentiary Rd. Boise, Idaho 83712

# TOXICOLOGY SAMPLE SUBMITTING AND REPORT FORM

Torzona	1
YPE OF SAMPLE: SRM-WP#2	(water sample from well)
å •	
OURCE OF SAMPLE: well	1.12.16.0
ATE COLLECTED 11/2/87 DATE	E RECEIVED 11/L/V
NALYSIS REQUESTED: Volatile Patroleum	- Products analysis
MARK KRALEY	
AMPLE AND SHIPPING CONTAINER CONDIT	TON: 250 ml glass bottle
AMPLE AND SHIPPING CONTAINER CONDITION	
narrow mouth	
ISCELLANEOUS INFORMATION	
THAIN OF CUSTODY? Yes [ \( \sime\) No [ ]. =	f ves. complete items #1-5.
1) Custody Records Present?	Yes [ No [ ]
2) Custody Seal present and intact?	Yes [ ] No [ ]
3) Sample tags or labels present?	Yes [ / No [ ]
(4) Agreement with dogumentation?	Yes [ No [ ]
Duit delvi	by Mark Kala sine day of SA
(5) METHOD OF SHIPMENT. DANS METHOD OF SHIPMENT. PLANE	alt is Wed. morning 11/4
REPORT RESULTS TO: X	
Name Special Resource Mgt.	ALL SAMPLES WILL BE RETURNED OR DISCARDED
200 11 4th Sente 206	AFTER 90 DAYS
city/zip Borie Pd. 83702 P	name Number 345-3667
11ty/21p //3000 4 8	TE REPORTED 11/4/87
SAMPLE Wt/VolD	The REPOSMED TO THE REPOSMENT OF THE PROPERTY
ANALYTICAL RESULTS CANTAIN ALLAY SAN	hydrogenione some of which
are consistent with dient 1# 2	,
	- s - Cunbrale
m 10. le 11. 116 FB 1773	111 -
	All (A)

REGEIVED NOV 0 5 1987 MOR

Log No. 87-1165

### IDAHO DEPARTMENT OF HEALTH AND WELFARE BUREAU OF LABORATORIES 2220 Old Penitentiary Rd. Boise, Idaho 83712

87-1166 F

## TOXICOLOGY SAMPLE SUBMITTING AND REPORT FORM

TYPE OF SAMPLE: SRM - WP #1 (water sample from well
SOURCE OF SAMPLE: WELL
DATE COLLECTED 11/2/87 DATE RECEIVED 11/2/87
ANALYSIS REQUESTED: Volatele Petroleur Products analysis
SUBMITTED BY: MARK KRALEY
SAMPLE AND SHIPPING CONTAINER CONDITION: 250 m/ glass lattle
Narrow mouth
MISCELLANEOUS INFORMATION
CHAIN OF CUSTODY? Yes [ No [ ]. If yes, complete items #1-5.
(1) Custody Records Present? Yes [ No [ ]
(2) Custody Seal present and intact? Yes [ ] No [ +
(3) Sample tags or labels present? Yes [ No [ ]
(4) Agreement with documentation? Yes [ ] No [ ]
(5) Method of Shipment: Direct delwing by Mul Kuly sam by of sample
REPORT RESULTS TO: Please ghome results by Web. Moraning 11/4/87
Name Sucial Resource Mat. ALL SAMPLES WILL BE
Address 200 N 4 5 Sunta #206 RETURNED OR DISCARDED AFTER 90 DAYS
City/Zip Brose Ad 83702 Phone Number 345-3667
SAMPLE WE/Vol
ANALYTICAL RESULTS Contains being end by dresslows some of which
on consistent with died # 2.
on consultation with died -
CEEK SE LUIN A WIND
EGEIVEM
NOV 0 6 1987

SRM, INC. / BOISE

# IL 10 DEPARTMENT OF HEALTH AN. MELFARE BUREAU OF LABORATORIES 2220 Old Penitentiary Rd. Boise, Idaho 83712

## TOXICOLOGY SAMPLE SUBMITTING AND REPORT FORM

TYPE OF SAMPLE: SRM-WP #3 (WATER PROM WELL SAMPLE
SOURCE OF SAMPLE: WEU
DATE COLLECTED 11/2/87 DATE RECEIVED 11/2/87
ANALYSIS REQUESTED: 16/4tile Petroleum Products analysis
SUBMITTED BY: Mark KARLEY
SAMPLE AND SHIPPING CONTAINER CONDITION: 250 M/ g/ass lattle
harrow month
MISCELLANEOUS INFORMATION
CHAIN OF CUSTODY? Yes [ W No [ ]. If yes, complete items #1-5.
(1) Custody Records Present? Yes [ ] No [ ]
(2) Custody Seal present and intact? Yes [ ] No [ ]
(3) Sample tags or labels present? Yes [ / No [ ]
(4) Agreement with documentation? Yes [ No [ ]
(5) Method of Shipment: Durit deluning by Monthloly sime day of simple
REPORT RESULTS TO: Please show well by West morning 11/4/87
Name Special Resource Mat. ALL SAMPLES WILL BE
Address 200 No. 4th Suite 206 RETURNED OR DISCARDED AFTER 90 DAYS
City/Zip Bosse Od 83702 Phone Number 345-3667
SAMPLE WE/VolDATE REPORTED_U/4/87
AKALYTICAL RESULTS CANTAINS heavy and by charactions some of
which are consistent with dielel #2.
CHEVEST (Fin ) orales
EGEIVE M

MAA n o 1881

SRM, INC. / BOISE

Log No. 87-1183

#### IL 10 DEPARTMENT OF HEALTH AND WELFARE BUREAU OF LABORATORIES 2220 Old Penitentiary Rd. Boise, Idaho 83712

#### TOXICOLOGY SAMPLE SUBMITTING AND REPORT FORM

TYPE OF SAMPLE: - VATER
SOURCE OF SAMPLE: WELL SRM-WP-W-1001
DATE COLLECTED /1/12/87 DATE RECEIVED /1//2/87
ANALYSIS REQUESTED: TETRACHLOROFTHENE
SUBMITTED BY: MARK KRALEY
SAMPLE AND SHIPPING CONTAINER CONDITION: VOA Bottles
Sample + Supl. OK
MISCELLANEOUS INFORMATION
CHAIN OF CUSTODY? Yes [ ] No [ ]. If yes, complete items #1-5.
(1) Custody Records Present? Yes [ No [ ]
(2) Custody Seal present and intact? Yes [ ] No [ /
(3) Sample tags or labels present? Yes [ \( \) No [ ]
(4) Agreement with documentation? Yes [ No [ ]
(5) Method of Shipment: DIRECT DELIVERY
REPORT RESULTS TO:
Name SPECIAL RESOURCE MANAGEMENT ALL SAMPLES WILL BE
Address: 200 N. 4th Suite 206 RETURNED OR DISCARDED AFTER 90 DAYS
City/Zip Base Id 83702 Phone Number 345-3667
SAMPLE Wt/VolDATE REPORTED
ANALYTICAL RESULTS 14 pour. 16 goon Tetra Chlarce Hune
No 1,4,1-Trichlowethene found
Letrockerockene confirmed CHEMIST & CHEMIST
by &c/11/5
NOV 1 6 1987

Date extracted: N/A Date analyzed: 11/25/87

Sample ID: WP-Well #1A

Methodology: EPA 624 VOLATILE COMPOUNDS

Compound		
Compound	Concentration	Reporting Level
Chloromethane	ppb (ug/L) BDL	ppb (ug/L) = -
Bromomethane	BDL	10
Vinvl chloride	BDL	10
Chloroethane	BDL	
Dichloromethane	BDL	10*
ACETONE	DOL	
Carbon disulfide	Bhr	
Trichlorofluoromethane	D // 0	
1.1-Dichloroethene	BDL	* Y
1.1=D1CD1OFOECDANA	BDL	
Trans-1,2-dichioroethene	BDL	
Chloroform	RMI	<del></del>
1,2-Dichloroethane	BDL	<del></del>
Z-Butanone	DD/	
1,1,1-Trichloroethane	BDL_	<u> </u>
1,1,1-Trichloroethane Carbon tetrachloride	BDL	<del></del>
VINVI ACPTATE	BDL	Tŏ
	BDL	• 6
1,2-Dichloropropane Cis-1,3-dichloropropene Trichloroethene	u	<del></del> ξ
Cis-1,3-dichloropropene	BDL	ξ
Trichloroethene	3	3
DIDIOMOCHIOFOMELNANE	BDL_	<u> </u>
+,+,4-111CHICHUEUNANE	BDL	· 5
Benzene	B TO T	1
Trans-1,3-dichloropropane	BDL BDL	<u> </u>
2-Chloroethylvinylether	BDL	10
Bromolorm	BDL	5
2-Hexanone	BDL	10
4-Methyl-2-pentanone	BDL	10
retrachioroethene	1228	3
1,1,2,2-Tetrachloroethane	BDL	3
Toluene	BDL	<u> </u>
Chlorobenzene	BDL	5
Ethvidenzene	BDL	5
styrene	BDL	5
Total xylenes	BDL	5
1,2-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene 1,4-Dichlorobenzene	BDL	
-, Dichioropenzene	BDL	10

BDL= Below detection limit \*\* = Detected but below reporting limit

Surrogate recoveries, \$
1,2-Dichloroethane-d4 83.0
Toluene-d8 134.2
Bromofluorobenzene 84.7

Date extracted: N/A Date analyzed: 11/25/87

Sample ID: WP-Well #6 2:25 p.m.

Methodology: EPA 624 VOLATILE COMPOUNDS

Compound	Concentration	Reporting Level
	ppb (ug/L)	ppb (ug/L)
Chloromethane	BDL T	
Bromomethane	RDf.	
Vinvl chloride	BDL	***
Chloroethane	BDL	Tů*
Dichloromethane	BDL	5
Acetone	BDL	10
Carbon disulfide	BDL	* š
Trichlorofluoromethane	BDI.	10
1,1-Dichloroethene	BDL	5
1,1-Dichloroethene 1,1-Dichloroethane Trans-1,2-dichloroethene	BDLBDL	5
Trans-1,2-dichloroethene	BDL	5
Chioroform	BDL	5
1,2-Dichloroethane	BDL	3
2-Butanone	BDL	5
2-Butanone 1,1,1-Trichloroethane Carbon tetrachloride	BDL	<u> </u>
Carbon tetrachloride	BDL	3
VINVI acetate	BDL	10
Bromodichloromethane		5
1,2-Dichloropropane	BDL	5
Cis-1,3-dichloropropene	BDL	5
Trichloroethene	BDL	3
Dibromochloromethane	BDL	5
= j = j = = = = = = = = = = = = = = = =		<u> </u>
Benzene	BDL	i
Trans-1,3-dichloropropane	BDL	5
2-Chloroethylvinylether	BDL	10
Bromoform	BDL	5
2-Hexanone	200	10
4-Methyl-2-pentanone	BDL	10
Tetrachloroethene	<b>_ _ _ _ _ _ _ _ _</b>	3
1,1,2,2-Tetrachloroethane	BDLBDL_	3
Toluene	BDL	5
Chlorobenzene	BDL	5
Ethylbenzene	18	5
Styrene	BDL	5
Total xylenes	BDL	5
1,2-Dichlorobenzene	BDL_	10
1,3-Dichioropenzene	BDL,	10
1,4-Dichlorobenzene	BDL_	10

BDL= Below detection limit
\*\* = Detected but below reporting limit

Surrogate recoveries, \$ 1,2-Dichloroethane-d4 84.6 Toluene-d8 136.2 Bromofluorobenzene 83.5

Date extracted: N/A Date analyzed: 11/25/87

Sample ID: WP-Well #8 3:15 p.m.

Methodology: EPA 624 VOLATILE COMPOUNDS

Compound	Concentration	Reporting Level
Chloromethane	ppb (ug/L) BDL	ppb (ug/L)
Chloromethane Bromomethane	BDL	10
Visul chlorido	BDL	10
Vinyl chloride	BDL	1
Chloroethane	BDL	10
Dichloromethane	BDL	5
Cambon digulated	BDL	10
Carbon disulfide	BDL	5
Trichlorofluoromethane 1,1-Dichloroethene 1,1-Dichloroethane Trans-1,2-dichloroethene	BDLBDL	10
1,1-Dichioroethene	BDL	5
1,1-Dictioroethane	BDL	5
Trans-1,2-dichtoroethene	BDL	5
Chioroform	BDL	5
1,2-Dichloroethane	BDL	3
2-Butanone	BDL	5
1,1,1-Trichloroethane	BDL	5
1,1,1-Trichloroethane Carbon tetrachloride	BDL	3
Vinyl acetate	BDL	10
Vinyl acetate Bromodichloromethane	BDL	5
1,2-Dichloropropane Cis-1,3-dichloropropene Trichloroethene Dibromochloromethane	BDL	<del></del>
Cis-1,3-dichloropropene	BDL	<del></del>
Trichloroethene	BDL	
		<del></del> {
1,1,2-Tricnioroetnane	BDL	<del></del>
Benzene	17	<del></del> -
Trans-1,3-dichloropropane	BDL	Ę
2-Chloroethylvinylether	BDL	10
bromororm	BDL	<del></del>
2-Hexanone	BDL	10
4-Methyl-2-pentanone	BDL	10
Tetrachloroethene 1,1,2,2-Tetrachloroethane	77	***
1,1,2,2-Tetrachloroethane	<u> </u>	<del></del>
Toluene	D V (	<del></del>
Chlorobenzene	BDL	
Ethylbenzene	38	
Styrene	BDL	<del></del> 2
Total xylenes	18	<del></del> 2
1.2-Dichlorobenzene	BĎĽ	
1,3-Dichlorobenzene	BDL	10
1,4-Dichlorobenzene	BDL	10
-,;-::	DV4	10

BDL= Below detection limit \*\* = Detected but below reporting limit

Surrogate recoveries, % 1,2-Dichloroethane-d4 83.2 Toluene-d8 71.2 Bromofluorobenzene 78.6

Date extracted: 11/25/87 Date analyzed: 11/29/87

### QA REPORT

Methodology: SW 8240 VOLATILE COMPOUNDS

Compound	riginal	Dum I danah s		
Cnioromethane	BDL	Duplicate BDL	R Spike Recover	'V
Bromomethane	BDL	BDL	_0NS	-
Vinvl chloride	BDL	BDL	_0NS	
Chloroethane	BDL		0NS	
Dichloromethane	-004	BDL	_0NS	
Acetone	BDL	BDL	3137.5%	
Carbon dignifide	BDL		_0NS	
Trichlorofluoromethane 1,1-Dichloroethene 1,1-Dichloroethane	BDL	BDL	0N5	
1.1-Dichloroethene	BDL	BDL	0NS	
1.1-Dichloroethane	BDL	BDL	59.6%	
*************************	BDL	BDL	064.7%	
Chloroform	BDL	BDL	59.6%	
1,2-Dichloroethane	3.5	BDL	0123.1%	
2-Butanone	-3.5 -1.5	0.13.		
1,1,1-Trichloroethane	BDL	2.40.		
Carbon tetrachloride	BDL	BDL	0102.8%	
Vinvl acetate	BDL	BDL	0116.0%	
Vinyl acetate Bromodichloromethane	BDL	BDL	0NS	
1,2-Dichloropropane Cis-1,3-dichloropropene Trichloroethene	-805	BDL	0100.9%	
Cis-1 3-dichloropropere	BDL BDL	BDL	0102.4%	
Trichloroethene	BDL_	BDL	0 127.1%	
Dibromochloromethane	BDL	BDL	122.64	
1,1,2-Trichloroethane		BDL	0106.0%	
Benzene	BDL	BDL	0145.1%	
Trans-1,3-dichloropropane	BDL_	BDL	0145.94	
2-Chloroethylvinylether	BDL	BDL	0126.8%	
Bromoform	BDL	BDL	154.5%	
2-Hexanone	BDL		0NS	
	BDL		0NS	
Tetrachloroethene	BDL.		0NS	
1,1,2,2-Tetrachloroethane	BDL		0121.3%	
Toluene	BDL		0 141 5%	
	0.25	0.00.	25 NS	
Ethylbenzene	BDL		126.9%	
Styrene	0.1	0.40.	3NS	
M - L - 1	BDL	BDL	0 NS	
	BDL	BDL	0NS	
	BDL	BDL	O NS	
1,4-Dichlorobenzene	BDL		0 NS	
-) - 2. Autotobeuzaua	BDL	BDL	NS	

BDL= Below detection limit NS = Not spiked

SPECIAL RESOURCE MANAGEMENT 213-73045-02 Page 2

Date Extracted: N/A
Date Analyzed: 12/8/87

Sample ID: SRM-WP-WELL #9a, 12/07/87, 5:10

### EPA 624 VOLATILE COMPOUNDS

Compound Name	Concentration ppb, (ug/l)	Reporting Level ppb, (ug/l)
Chloromethane	BDL	10
Bromomethane	BDL	10
Vinyl chloride	BDL	i
Chloroethane	BĎĽ	10
Dichloromethane	BDL	10
Acetone	BDL	10
Carbon disulfide	BDL	10
1,1-Dichloroethene	BDL	10
1,1-Dichloroethane	BDL	10
Trans-1,2-dichloroethene		10
Chloroform	BDL	10
1,2-Dichloroethane	BDL	3
2-Butanone	BDL	10
1,1,1-Trichloroethane	BOL	10
Carbon tetrachloride	BDL	3
Vinyl acetate	BDL	10
Bromodichloromethane	₽DL	10
1,2-Dichloropropane	BDL	10
Cis-1,3-dichloropropene	BDL	10
Trichloroethene	7.5	3
Dibromochloromethane	BDL	10
1,1,2-Trichloroethane	BDL	10
Benzene	BDL	.1
Trans-1,3-dichloropropane		10
2-Chloroethylvinylether	BDL	10
Bromoform	BDL	10
2-Hexanone	BDL	10
4-Methy1-2-pentanone	BDL	10
Tetrachloroethene	660	3
1,1,2,2-Tetrachloroethane		3
Chlorobenzene	BDL	3 5 5 5 5
Ethylbenzene	BDL BDL	2
Styrene	BOL	
Total xylenes	BDL	5 5
1,2-Dichlorobenzene	BDL	10
1,3-Dichlorobenzene	BDL	10
1,4-Dichlorobenzene	BDL	10
a, Trui Gui I or Guell 4 elle	UUL	10

BDL = Below Detection Limit

Surrogate Recoveries, %
1,2-Dichloroethane-d4 83.4
Toluene-d8 108.2
Bromofluorobenzene 100.8

# APPENDIX F

MISCELLANEOUS SAMPLE RESULTS

### ANALYTICAL LABORATORIES, INC.

#### 1s04 N. 33rd ST. BOISE, IDAHO 837u3 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8764

SPECIAL	RESOURC	CE MANAGI	EMENT
<b>200 NORT</b>	H 4TH ST	r - Suite	#10
BOISE , 1	ID 83702		

DATE OF COLLECTION -: 12/02/87 TIME OF COLLECTION -: 5:00 PM DATE RECEIVED ----: 12/03/87 DATE REPORTED ----: 12/08/87

SUBMITTED BY -:	,
-----------------	---

ESULTS IN HG/1(PPM)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISMS/100m
IOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, MPH
HEMICAL OXYGEN DEMAND —:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN
ESIDUE HONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS
IIL & GREASE:		STAPHYLOCOCCUS / gran
ESULTS IN NG/L (PPM) UNLESS NOTED		
CIDITY:	CYANIDE HEAK ACID DIS:	PHOSPHATE TOTAL -
LKALIHITY:	E P TOXICITY:	RADIUM GA-GB
MMONIA DIRECT ——:	FLUORIDE DISTILLED:	RESIDUE VOLATILE
MMONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE YOTAL
ICARBONATE:	HERBICIDES:	residue total filterable-
ORON:	HARDNESS:	SETTLEABLE MATTER
MADE:	NITRATE N:	STD PLATE COUNT
BON DIOXIDE:	NITRITE N:	SILFATE
ARBONATE:	NITROGEN ORGANIC:	SUFIDE
LORIDE:	HITROGEN TOTAL KJELDAHL -:	SURFACTANT
HLORINE PESIDUAL:	OXYBEH DISSOLVED:	tannin & Lichin ———
OLOR:	PC8:	TEMPERATURE
ONDUCTIVITY ::	PESTICIDES:	TOTAL ORGANIC CARBON
DRIROSIVITY:	PHÉHOLS:	TRIHALOMETHANE
YANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.)
YANIDE TOTAL:	PHOSPHATE ORTHO:	
LINININ	COPPER	SELENIUM
NTIHONY	GOLD	SILICA
RSENIC;	IRON	SILICON —
ARIUN ————	LEAD	SILVER
RYLLIUM:	MACHESIUM	SODIUM
WITH:	MANGANESE	THALLIUM
ACION	MERCURY	TIN
RONIUM:	NOLYBOENLM:	TITANIUM
EXAVALENT CHRONIUN:	NICKÉL	YANADIUM
DBALT	POTASSIUM:	ZINC —————

COMMENTS: TETRACHLOROETHYLENE = 0.338

Michael Moore MB

hichael D. Hoore

### ANALYTICAL LABORATOFIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342=5515 AREA CODE 208

## WATER QUALITY REPORT SAMPLE NUMBER - 8765

SPECIAL RESOURCE MANAGEMENT DATE OF COLLECTION -: 12/02/87 200 NORTH 4TH ST - SUITE #10 TIME OF COLLECTION -: 5:00 PM BOISE , ID 83702 DATE RECEIVED ---: 12/03/87 DATE REPORTED ---: 12/08/87 SUBMITTED BY -: SOURCE --: SRM-WP-DRUM #2 RESULTS IN NG/1(PPM) RESULTS IN ORGANISHS/100ml RESULTS IN ORGANISMS/100ml FECAL COLIFORM BACTERIA -: BIOCHEHICAL OXYGEN ----: TOTAL COLIFORM, MPN ---: CHEMICAL OXYGEN DEMAND -: FECAL COLIFORM, HPN ----: FECAL STREP BACTERIA ---: RESIDUE NONFILTERABLE ---: TOTAL COLIFORN BACTERIA -: PSEUDOHONAS ----: OIL & GREASE ----STAPHYLOCOCCUS / gram ---: RESULTS IN HG/L (PPM) UNLESS NOTED ACIDITY ---: CYANIDE WEAK ACID DIS -: PHOSPHATE TOTAL ---: ALKALIHITY -----RADIUM GA-GB -----E P TOXICITY ---: AMMONIA DIRECT ----RESIDUE VOLATILE ----: FLUORIDE DISTILLED ----: AMMONIA DISTILLED ----: FLUORIDE DIRECT ---: RESIDUE TOTAL HERBICIDES : BICARBONATE ----: RESIDUE TOTAL FILTERABLE-: BORON ----SETTLEABLE MATTER ----: NITRATE H ---STD PLATE COUNT ----NITRITE N CARBON DIOXIDE ----SULFATE ----CARBONATE ---:
CHLORIDE ---: NITROGEN ORGANIC ----SURFACTANT -NITROGEN TOTAL KJELDAHL -: CHLURINE RESIDUAL ----: OXYBEN DISSOLVED ----: TANNIN & LIGHTH ----TEMPERATURE ----PC8 ----COLOR ----PESTICIDES -CONDUCTIVITY ---: TOTAL ORGANIC CARBON ----: PHENOLS -----TRIHALOMETHANE ---:
TURBIDITY (N.T.U.) ---: CORROSIVITY ----: CYANIDE FREE ----: CYANIDE TOTAL ----: PHOSPHATE ORTHO -----: COPPER ---SELENIUM ----ALUMINUM ----ANTIHONY ----: 60LD ----SILICA ----SILICON ----ÎRON ----LEAD ----BARIUM ----HACHESIUM ----BERYLLIUM -----THALLIUM -CADHTÚN -----: HANGANESE ---CALCIUM ----TIN ---HERCURY ---CHROHIUM ----TITANIUH ----HOLYBDENUM ----VANADIUM ----HEXAVALENT CHRONIUM ----: NICKEL -POTASSIUM ----:

COMMENTS: TETRACHLOROETHYLENE = 0.332

had Moore M. HICHAEL D. HOORE

# ANAL TICAL LABORAT RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8766

200 NORTH 4TH ST - SUITE #10 BOISE , ID 83702 SUBMITTED BY -:		DATE OF COLLECTION -: 12/02/87 TIME OF COLLECTION -: 4:25 PM DATE RECEIVED: 12/03/87 DATE REPORTED: 12/08/8
SOURCE —: SRM-WP-DRUM  RESULTS IN HE/1(PPM)	· · · · · · · · · · · · · · · · · · ·	
in the state of th	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISMS/100el
BIOCHEMICAL OXYGEN:	FÉCAL COLIFORM BACTERIA -:	TOTAL COLIFORM, HPN:
CHEMICAL OXYGEN DEMAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN
RESIDUE NONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDOHONAS
OIL & GREASE:	•	STAPHILOCOCCUS / gram —:
RESILTS IN HG/L (PPH) UNLESS NOTED		· ·
ACIDITY:	CYANIDE HEAK ACTO DIS:	PHOSPHATE TOTAL:
ALKALINITY:	E P TOXICITY	RADIUM GA-GB
AMMONTA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE
AMMONIA DISTILLED	FLUORIDE DIRECT	RESIDUE TOTAL
BICARBONATE	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
BORON:	HARDNESS:	SETTLEABLE MATTER
CONTIDE:	HITRATE N:	STD PLATE COUNT
RON DIOXIDE	MITRITE N:	SUFATE
CARBONATE	NITROGEN ORGANIC:	SUFIDE
CHLORIDE:	NITROGEN TOTAL KJELDAHL -:	SURFACTANT
CHLORINE RESIDUAL:	OXYGEN DISSOLVED:	TANGIN & LIGHIN
COLOR:	PC8:	TEMPERATURE
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY	PHENOLS:	TRIHALOMETHANE
CYANIDE FREE -:	pH (S.U.):	TURBIDITY (N.T.U.):
CYANIDE TOTAL:	PHOSPHATE ORTHO:	,
ALUNINUM ————————————————————————————————————	A48050	
ANTIHONY	COPPER:	SELENTUM
ARSENIC	SOLD:	STLICA:
BARIUM	IRON:	SILICON:
BERYLLIUM	LEAD:	STLVER:
CADITUM	MAGNESTUM:	S00 IUH:
CALCIUM ———	HANGANESE:	THALLIUM:
CHRONTUM	HEROLRY:	<u> </u>
HEXAVALENT CHRONIUM:	MOLYBDENUM:	TITANIUH:
COBALT:	NICKEL:	VANADIUM:
WORL!	POTASSIUM:	ZINC ———;

COMMENTS: TETRACHLOROETHYLENE = 0.007

Michael More ans

MICHAEL D. HOORE

### ANALYTICAL LABORATCRIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

### WATER QUALITY REPORT

#### SAMPLE NUMBER - 8800

SPECIAL RESOURCE MANAGEMENT DATE OF COLLECTION -: 12/04/87 200 NORTH 4TH ST - SUITE #10 TIME OF COLLECTION -: 4:35 PM BOISE . ID 83702 DATE RECEIVED ---: 12/04/87
DATE REPORTED ---: 12/08/87 SUBMITTED BY -: SOURCE --: SRM - WELL #9 PIT RESULTS IN MG/1(PPH) RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISMS/100ml BIOCHENICAL OXYGEN ----: FECAL COLIFORN BACTERIA -: TOTAL COLIFORM, HPN ----: CHÉMICAL OXYGEN DEMAND --: FECAL STREP BACTERIA ---: FECAL COLIFORM, HPN ----: RESIDUE NONFILTERABLE ---: TOTAL COLIFORM BACTERIA -: PSEUDOHONAS ----: OIL & GREASE ---: STAPHYLOCOCCUS / gram ---: RESULTS IN HG/L (PPH) UNLESS NOTED ACIDITY ----CYANIDE WEAK ACID DIS -: PHOSPHATE TOTAL ---: RADIUM GA-GB ---: ALKALINITY ----: E P TOXICITY ---: AMMONIA DIRECT -----RESIDUE VOLATILE ----FLUORIDE DISTILLED ----: AMMONIA DISTILLED ----: FLUORIDE DIRECT ----: RESIDUE TOTAL ----BİÇARBONATE ----HERBICIDES ----RESIDUE TOTAL FILTERABLE-: HARONESS ----BORON ----SETTLEABLE MATTER ----: NITRATE N STD PLATE COUNT -----: CARBON DIOXIDE ----NITRITE N SULFATE ----CARBONATE :: NITROGEN ORGANIC ----SURFACTANT ----HITROGEN TOTAL KJELDAHL -: CHLORINE RESIDUAL ----OXYBEN DISSOLVED -----TANGIN & LIGHIN ----: COLOR ----TEMPERATURE ----PCB ----PESTICIDES ----CONDUCTIVITY ----TOTAL ORGANIC CARBON ---: CORROSIVITY ----PHENOLS ----TRIHALOMETHANE ---: pH (S.U.) -----CYANIDE FREE TURBIDITY (N.T.U.) ---: CYANIDE TOTAL ---PHOSPHATE ORTHO ----: ALUMINAM ---: COPPER ----SELENIUM ----GOLD ----: SILICA ----ARSENIC ----SIL ICON ----BARIUM -----LEAD ----SILVER ----BERYLLIUM -----MAGNESIUM ----SOOTUM ----HANGAVESE -THALLIUM ----HERCURY ---TIN ---TITANIUM ----HOLYBOENUN ----NICKEL -YANADIUH ----HEXAVALENT CHROHIUM ----: POTASSIUM ----ZINC —

COMPENTS: TETRACHLOROETHYLENE = 0.136

Michael Morre
HICHAEL D. HOURE

### ANALTTICAL LABORATCRIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8767

DATE OF COLLECTION -: 12/02/87 SPECIAL RESOURCE MANAGEMENT TIME OF COLLECTION -: 4:45 PM 200 NORTH 4TH ST - SUITE #10 DATE RECEIVED ---: 12/03/87 BOISE , ID 83702 DATE REPORTED ---: 12/08/87 WELL HID PIT MK SUBMITTED BY -: SOURCE --: SRM-WP-DRUM #10 PIT RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISMS/100ml RESULTS IN MG/1(PPM) TOTAL COLIFORM, MPN ----: FECAL COLIFORM BACTERIA -: BIOCHENICAL OXYGEN ---: FECAL COLIFORM, HPN ---FECAL STREP BACTERIA ---: CHENICAL OXYGEN DEHAND -: PSEUDOHONAS ---: TOTAL COLIFORM BACTERIA -: RESIDUE HONFILTERABLE --: STAPHYLOCOCCUS / gram --: OIL & GREASE ---RESULTS IN MG/L (PPM) UNLESS HOTED PHOSPHATE TOTAL -CYANIDE HEAK ACID DIS -: ACIDITY ----RADIUM GA-GB ----E P TOXICITY ---: ALKALINITY ---RESIDUE VOLATILE ----FLUORIDE DISTILLED -AMONIA DIRECT ---RESIDUE TOTAL ----FLUORIDE DIRECT ---AMONIA DISTILLED ---RESIDUE TOTAL FILTERABLE -: HERBICIDES ---BICARBONATE ----SETTLEABLE MATTER ---: HARDNESS -BORON ----KOHIDE ----STD PLATE COUNT -NITRATE N ----NITRITE H SI FATE CARBON DIOXIDE ----NITROGEN ORGANIC ---SILFIDE ---CARBONATE ----SURFACTANT -MITROGEN TOTAL KJELDAHL -: CHLORIDE -TANNIN & LIGHTH ----: OXYGEN DISSOLVED ---: CHLORINE RESIDUAL ---PC8 ----TEMPERATURE ---COLOR ----TOTAL ORGANIC CARSON ---: PESTICIDES ----CONDUCTIVITY — TRIHALOMETHANE ----PHENOLS -CORROSIVITY ---pH (S.U.) TURBIDITY (N.T.U.) ----: CYANIDE FREE -PHOSPHATE ORTHO ----CYANIDE TOTAL ---SELENTUM —— COPPER -ALUNINUM ----ANTIHONY ----SILICA ---60LD ---SILICON -ARSENIC ----IRON -BARIUN ----LEAD ----SILVER ---SODIUM ----HAGNESTUM ---BERYLLIUM -----THALLIUM ----HANGANESE -CADMIUM -HERCURY -CALCIUM ----

MOLYBOENLIM -

POTASSIUM ----

NICKEL ----

COMMENTS: TETRACHLOROETHYLENE = (0.005

CHRONIUM ----

HEXAVALENT CHROMIUM -

Michael D. HOUSE

TITANIUH --

WILDAMAY ---

### I. 10 DEPARTMENT OF HEALTH AN WELFARE BUREAU OF LABORATORIES 2220 Old Penitentiary Rd. Boise, Idaho 83712

### TOXICOLOGY SAMPLE SUBMITTING AND REPORT FORM

TYPE OF SAMPLE: WATER
SOURCE OF SAMPLE: Grab SRM-WP-W-+001 1003 MV
DATE COLLECTED 11/12/87 DATE RECEIVED 11/12/87
ANALYSIS REQUESTED: TETRA CHICAG ETHENE
SUBMITTED BY: MARK KARLEY
SAMPLE AND SHIPPING CONTAINER CONDITION: VOA Gottles
Sample contains bubbles (to be discarded): Dup. = OK Du
MISCELLANEOUS INFORMATION
CHAIN OF CUSTODY? Yes [ ] No [ ]. If yes, complete items #1-5.
(1) Custody Records Present? Yes [ No [ ]
(2) Custody Seal present and intact? Yes [ ] No [ ]
(3) Sample tags or labels present? Yes / No [ ]
(4) Agreement with documentation? Yes [ ] No [ ]
(5) Method of Shipment: DRECT Delivery
REPORT RESULTS TO:
Name SPECIAL RESOURCE MANAGEMENT ALL SAMPLES WILL BE
Address: 200 No 4 Sorte 206 RETURNED OR DISCARDED AFTER 90 DAYS
city/zip Brise Id 83702 Phone Number 345-3667
SAMPLE Wt/VolDATE REPORTED
ANALYTICAL RESULTS No totach lorge theme or 1,1,1- In
chluse thane found. MDh Totacl-ethere = 0.19
CEENTST 733 Elikareta
CHEMIST 19 STARTING

### IDAL DEPARTMENT OF HEALTH AND BUREAU OF LABORATORIES 2220 Old Penitentiary Rd. Boise, Idaho 83712

# TOXICOLOGY SAMPLE SUBMITTING AND REPORT FORM

DURALURIES, INC.

#### 1804 N. 33rd ST. BOISE, IDAHO 83/03 PHONE 342-5515 AREA CODE 208

#### WATER QUALITY REPORT

### SAMPLE NUMBER = 8343

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE 10 BOISE , ID 83702

DATE OF COLLECTION -: 11/12/87

TIME OF COLLECTION -:

DATE RECEIVED ---: 11/12/87

SUBMITTED BY -: BRAD SOURCE: SRM-WP-DB-002		DATE REPORTED: 12/08/87
RESULTS IN HG/1(PPH)	RESULTS IN ORGANISHS/100ml	RESULTS IN ORGANISHS/100ml
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORM, MPM:
CHENICAL OXYGEN DENANO:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN
RESIDUE HONFILTERABLE —:	TOTAL COLIFORN BACTERIA -:	PSELDOHONAS
OIL & GREASE:		STAPHYLOCOCCUS / gram —:
RESULTS IN HG/L (PPH) UNLESS NOTED		
ACIDITY:	CYANIDE HEAK ACID DIS:	PHOSPHATE TOTAL:
ALVALINITY ————:	E P TOXICITY:	RADIUM GA-GB
AMMONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:
AMMONIA DISTILLED ——:	FLUORIDE DIRECT ———:	RESIDUE TOTAL
BICARBONATE:	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:
BORON:	HARDHESS:	SETTLEABLE HATTER:
BROHIDE:	HITRATE N:	STD PLATE COUNT:
CARBON DIOXIDE:	NITRITE N:	SULFATE:
CARBONATE	NITROGEN ORGANIC	SULFIDE:
CHLORIDE:	NITROGEN TOTAL KJELDAHL -:	SURFACTANT
CHLORINE RESIDUAL:	OXYGEN DISSOLVED	TANOTH & LIGHTH
COLUR:	<b>FCI</b> :	TEMPERATURE:
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORROSIVITY:	PHENOLS:	TRIHALONETHANE
CYANIDE FREE:	pH (S.U.):	TURBIDITY (N.T.U.);
CYANIDE TOTAL:	PHOSPHATE ORTHO:	
ALINDIM	COPPER	. ACI CITTA
ANTIHONY	SOLD	SELENTUM: SILICA:
ARSENIC	IRON =	SILICON
BARTUM	LEAD ———	SILVER
BERYLLIUM	HAGNESIUM	OUTTON CONTINUE
CADITUM	KANGANESE	SOUTH
CALCIUM ———	MERCURY:	THALLIUM:
CHRONIUM	HOLYBOENUM	TIN
HEXAVALENT CHRONIUM:	NICKEL	YANADIUN
COBALT	POTASSIUM	
•	ruiassun :	2INC:

COMMENTS: TETRACHLOROETHYLENE = (0.250

MICHAEL D. MOORE

# ANALYTICAL LABORATORIES, INC.

### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT SAMPLE NUMBER - 8551

200 NORTH 4TH ST - SUITE		DATE OF COLLECTION -: 11/20/8' TIME OF COLLECTION -:
BOISE , ID 83702		DATE RECEIVED: 11/23/8
SUBMITTED BY -: PAT STOI SOURCE: SRM-WP-BG-001	.L	DATE REPORTED: 12/02/8
RESULTS IN MG/1(PPM)	RESULTS IN ORGANISMS/100ml	RESULTS IN ORGANISMS/100e1
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TATU AN PERE
CHEMICAL OXYGEN DEMAND -:	FECAL STREP BACTERIA	TOTAL COLIFORM, MPN:
RESIDUE NONFILITERABLE:	TOTAL COLIFORM BACTERIA -:	FECAL COLIFORM, MPN:
UIL & GREASE	TOTAL GOCAT CHAIL PROJECTIAN .	PSEUDOMONAS: STAPHYLCCOCCUS / gram:
RESULTS IN MG/L (PPM) UNLESS MOTED		
ACIDITY:	CYANITE WEAK ACID DIS:	PHOSPHATE TOTAL
ALKALINITY:	E P TOXICITY	RADIUM GA-GB
AMONIA DIRECT:	FLUORIDE DISTILLED	RESIDUE VOLATILE
AMMONIA DISTILLED:	FLUORICE DIRECT	RESIDUE TOTAL
BICARBONATE:	HERBICIDES	RESIDUE TOTAL FILTERABLE-:
BURUM	HARDHESS	SETTLEABLE MATTER
BRCHIDE:	NITRATE N	STD PLATE COUNT
RECH DIOXIDE:	NITRITE N	SULFATE
CARBONATE	NITROGEN ORGANIC	SULFIDE
CHLORIDE:	NITRUGEN TOTAL KJELDAHL -:	SURFACTANT
CHLURINE RESIDUAL:	OXYGEN DISSOLVED	TANIN & LICHTN
WLUR	PO8	TEMPERATURE
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:
CORRUSIVITY ———:	PHENOLS	TRIHALOMETHANE
CYANIDE FREE	pH (S.U.):	TURBIDITY (N.T.U.)
CYANICE TOTAL:	PHOSPHATE ORTHO:	(1.1.0.)
ALUMINON	COPPER	
ANTIHONY	60LD	SELENTUM:
ARSENIC	IRON	SILICA:
BARIUM	LEAD	SILICON
BERYLLIUM	MAGNESIUM	SILVER:
CADMIUM	IMENES	SODTUM:
CALCIUM	MERCURY	THALLIUM
CHRONIUM	HOLYBOENON	TIN
HEXAVALENT CHROMIUM	NICKEL	TITANIUM
COSALT	POTASSIUM	:
	(Alwoning	ZINC

MICHAEL D. HOURE

### ANAI TICAL LABORAT RIES, INC.

1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

# WATER QUALITY REPORT

SAMPLE NUMBER - 8581 😘

SPECIAL RESOURCE MANAGEMENT DATE OF COLLECTION -: 11/23/87 200 NORTH 4TH ST - SUITE #10 TIME OF COLLECTION -: 3:55 PM BOISE , ID 83702 DATE RECEIVED ----: 11/24/87 DATE REPORTED ----: 12/02/87 SUBMITTED BY -: SOURCE --: SRM-WP-DECON RESULTS IN MG/1 (PPM) RESULTS IN ORGANISMS/100ml RESULTS IN ORGANISMS/100ml BĪUCHEHICAL UXYGEN ----: FECAL COLIFORM BACTERIA -: TOTAL COLIFORM, MPN ----: CHEMICAL OXYGEN DEMAND --: FECAL STREP BACTERIA ----: FECAL COLIFORM, HPN ---: RESIDUE NONFILTERABLE ---: TOTAL COLIFORM BACTERIA -: PSEUDOMONAS ----: OIL & GREASE ----: STAPHYLOCOCCUS / grag ---: RESULTS IN MG/L (PPM) UNLESS NOTED ACIDITY ---: PHOSPHATE TOTAL ---:
RADIUM GA-GB ---: CYANIDE WEAK ACID DIS -: ALKALINITY -----E P TOXICITY ----APPIONTA DIRECT ----: FLUORIDE DISTILLED ----: RESIDUE VOLATILE ----: FLUORIDE DIRECT ----: AMMONIA DISTILLED ----: RESIDUE TOTAL ----: HERBICIDES ----BICARBONATE -----RESIDUE TOTAL FILTERABLE-: HARDNESS ----BURON ----SETTLEABLE NATTER ----: RUMIDE -----NITRATE N ----: STD PLATE COUNT ---SULFATE ----CARBON DIOXIDE ----: NITRITE N -----CARBONATE ---:
CHLORIDE ----: SUFIDE ----NITROGEN ORGANIC ---: SURFACTANT ----MITROSEN TOTAL KUELDAHL -: TANNIN & LIGNIN ----CHLORINE RESIDUAL ----: OXYGEN DISSOLVED ----: PCB -----TEMPERATURE ----CONDUCTIVITY ----PESTICIDES ----TOTAL ORGANIC CARBON ----: PHENOLS ----: CURROSIVITY ----: TRIHALOMETHANE ----CYANIDE FREE ------TURBIDITY (N.T.U.) ---: CYANIDE TOTAL ----: PHOSPHATE ORTHO ----: ALUMINUM ------COPPER ---: SELENTUM ----ANTIHONY ----: 60LD -----SILICA ----SILICON ---ARSENIC ----LEAD ----BARIUM -----SILVER ----BERYLLIUM -----HAGNESIUM ----SODIUH ---: CADMIUM ----HANGANESE -----THALLIUM -----CALCIUM ----HERCURY ----TIN -----

MOLYBOENUM ----:

PUTASSIUM ----:

COMMENTS: TETRACHLOROETHYLENE = (0.005

CHROMIUM -----

HEXAVALENT CHROHIUM ----:

COBALT ----:

Michael D. Moore

TITANIUM -----

VANADIUM -----

71NC -----

### ANAL TICAL LABORATORIES, INC.

### 1804 N. 33rd ST. BOISE, IDAHO 83703 PHONE 342-5515 AREA CODE 208

## WATER QUALITY REPORT SAMPLE NUMBER - 9140

SPECIAL RESOURCE MANAGEMENT 200 NORTH 4TH ST - SUITE 310 BOISE, ID 83702		DATE OF COLLECTION -: 12/16/87 TIME OF COLLECTION -: 9:10 AM DATE RECEIVED: 12/16/87 DATE REPORTED: 12/18/87	
SUBMITTED BY -: SOURCE: SRM-WP-DECON #2			
RESULTS IN HG/1(PPM)	RESULTS IN ORGANISMS/100ml	RESULTS IN URGANISHS/100ei	
BIOCHENICAL OXYGEN:	FECAL COLIFORM BACTERIA -:	TOTAL COLIFORN, MPN:	
CHEHICAL OXYGEN DEHAND -:	FECAL STREP BACTERIA:	FECAL COLIFORM, MPN:	
RESIDUE NONFILTERABLE:	TOTAL COLIFORM BACTERIA -:	PSEUDONCAVAS	
OIL & GREASE:		STAPHYLOCOCCUS / gram —:	
RESULTS IN HG/L (PPM) UNLESS NOTED	<u> </u>		
ACIDITY	CYANIDE WEAK ACID DIS -:	PHOSPHATE TOTAL:	
ALKALINITY	E P TOXICITY:	RADIUH GA-GB:	
APPONIA DIRECT:	FLUORIDE DISTILLED:	RESIDUE VOLATILE:	
APPONIA DISTILLED:	FLUORIDE DIRECT:	RESIDUE TOTAL:	
BICARBONATE	HERBICIDES:	RESIDUE TOTAL FILTERABLE-:	
BORUN	HARDNESS:	SETTLEABLE MATTER:	
BROMIDĒ	NITRATE N:	STD PLATE COUNT:	
CARBON DIOXIDE:	NITRITE N:	SULFATE:	
CARBONATE	NITROGEN URGANIC:	SUFFICE:	
CHLORIDE	NITROGEN TOTAL KJELDAHL -:	SURFACTANT	
CHORINE RESIDUAL:	OXYGEN DISSOLVED:	TANVIN & LIGHIN:	
COLOR	PCB:	TEMPERATURE:	
CONDUCTIVITY:	PESTICIDES:	TOTAL ORGANIC CARBON:	
CORROSIVITY:	PHENOLS:	TRIHALGHETHANE:	
CYANIDE FREE	pH (S.U.):	TURBIDITY (N.T.U.):	
CYANIDE TOTAL:	PHOSPHATE ORTHO:		
ALUMINUM:	COPPER:	SELENIUM:	
ANTINUAY:	60LD:	SILICA:	
ARSENIC::	IRON:	SILICON:	
BARIUM:	LEAD:	SILYER:	
BERYLLIUM	HAGNESIUM:	SODIUM:	
CADHIUN:	MANGANESE:	THALLIUM	
CALCIUM:	MERCURY:	TIN,:	
CHRONIUM:	HOLYBDENUH:	TITANIUM:	
HEXAVALENT CHRONIUM:	HICKĒL:	VANADIUH:	
COBALT:	POTASSIUM:	ZINC:	
vvvna i	- 112		

COMMENTS: TETRACHLOROETHYLENE = (0.005

DATE OF COLLECTION -: 12/16/87

# APPENDIX G

SAMPLE CHAIN OF CUSTODY RECORDS

Project Code   Project Name	
UIP-5KM 12-0094-COI	
Samplers (Signature)	
Bradley Harr and Mark Kraley	Remarks
Date of collection 17-2-87	
SRM - 41P H water	
	Analyze for Volatile Petroleum poulite
3RM-WP#Z unter	•
5RM - UP #3 11/21/20	
SRM- UP#3 water	
Relinquished by (Sign.) Date Time Received by (Sign)	Relinquished by (Sign) Date Time Received By
Mark Kreley 11/2/8 4:00 M Hon Coupley	(Sign)
Relinquished by (Sign.) Date Time Received by (Sign)	Relinquished by (Sign) Date Time Received By (Sign)
Relinquished by (Sign.) Date Time Received for Lab by (Sign)	

SRM \* P. O. Box 3578 \* Billings, Montana \* 406-245-9878

To State Lab

to form finaly rung to Promise

Dec. Mesources

# CHAIN OF CUSTODY

Project Code Project Name  WP-SRM 12-0094-  Samplers (Signature)  Brad Harr and Mark Kra			Remarks
	Type Media	1 1	check for tetrachloro ethene
5AM-WP-W-1002 SAM-WP-DB-002	acap geptis	<u> </u>	
Relinquished by (Sign.) Date Tim	e Received 1	by (Sign)	Relinquished by (Sign) Date Time Received By (Sign)
Relinquished by Sign.) Date Tim	Received 1	المان (Sign)	Relinquished by (Sign) Date Time Received By (Sign)
Relinquished by (Sign.) Date Tin	Received	for Lab by (Sign)	Date Time Remarks

Project Code Project Name  WP-SRM 12-0094-C  Samplers (Signature)  Brad Hass and Mask 1			Remarks -
	Type medin date	chart for tetrachloroe	
SRM - (UP - 11) - 1001 SRM - (UP - DB - 001	Genb 11etmis 11-12-87	' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	11
SRM-WP - W-1003	GRAR WATER 11-12-87	11	
Relinquished by (Sign.) Date Time  Mach Kulur 1/12/67 3:00/1	Received by (Sign)	Relinquished by (Sign) Date To	ime Received By (Sign)
Relinquished by (Sign.) Date Tim		Relinquished by (Sign) Date T:	ime Received By (Sign)
Relinquished by (Sign.) Date Tim	Received for Lab by (Sign)		

SRM \* P. O. Box 3578 \* Billings, Montana \* 406-245-9878

To State Lab

Front Seal 1699
Back Seal
Sealed by 6A Date 11-16-87

Shuttle Opened	in field by R //	<b>7</b>
Front Seal Back Seal	1694	Shuttle Researed by Front Seal
Date		Back Seal
		Date 11-2

							CHAIN OF SU										
PR	OJEC1				<del></del>		CHAIN OF CUSTO		REC	ORD					PAC	SE _L	05 :
	73561		:				LOCATION: 86				IAMA	YSIS	DE	วบเกย			UF <u>Q</u>
ZIAI T	SAMPLER	CONTAINERS	СААВ	COMPOSITE N	C C C C C C C C C C C C C C C C C C C	WATER	SAMPLE DUE BY  SAMPLE DUE BY  SAMPLE DUE BY  SAMPLE DUE  SAMPLE DU		Motals			1 313	REC	JUIRE	D		SPLIT (Y) (N)
2:45	BH	1	<del>                                     </del>	X	X	-			8								SPLI
3:00	BH			4	k		58M-WP-NT-1 SRM-WP-NT-Za	X	X	-							
3:39	MK	1		4	Y		SRM-WP-5# 13	X									
3:14	MK	1		4	4		SRM-WP-5#16a	X			$\dashv$				-		
1:40 pm	mŁ	\		4	4		5 RM-WP-5#11	Х									
pm				Ϋ́ Υ	×		SRM-WP-5#5	X							1	1	
REL	INQUIS	HED	DY	DA	ATE	TIME	RECEIVED BY										
Sud	90	).#A	w	11/2	3/3/	5:30 pm	Federal Express Kathleen Eaves	17/2	1/27 10	FIME 5:30		SA	MPLE	CONE	OITIC	NS	
<b></b>								1.	_		<u>.</u>						

PSI Lab

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sealed 	by _		4		0	ate	Shuttle Opened in field by ont Seal Back Seal Date								Front Seal  Back Seal  Date  11-2			
SAMPLE BADOSITE CAND CONTAINERS C						LOCATION WP-	OF CUSTO ON: 6 Boise II 1-23-87	BH	T		ЛИАІ	YSIS	REQ	NIKEO		2 of 2		
	SAMPL	CONTAIN	GAAB	COMPOSI	າເດຣ	3	SAMP	15. 1.1).	-10			i i				1	PLIT (Y) (N)	
pu 2015	PN	2				X	5BM-4 5BM-4	voll #6 P-Woll #8 P-Well #	X X								Ö	
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• .

Samplers (Signature)  More knows from Low for Danages  Malluly Bu Plan Park Provide  May wr wr we was 5 (2- was (wes))  Sea wife for the was 5 (2- was (wes))  Sea wr wr we was 7 (2- was (wes))  Sea wr wr we was 7 (2- was (wes))  Wr Se - 207 - 157 - 168 was 5 (wes)  Sea wr fe - col derivate for was 6 (sign)  May Se - 207 - 168 was 6 (sign)  May Se - 207 - 168 was 7 (wes)  Sea wr fe - col derivate for was 6 (sign)  Relinquished by (Sign.) Date Time Received by (Sign)  Relinquished by (Sign.) Date Time Received by (Sign)  Relinquished by (Sign.) Date Time Received for Lab by (Sign)  Relinquished by (Sign.) Date Time Received for Lab by (Sign)  Relinquished by (Sign.) Date Time Received for Lab by (Sign)  Relinquished by (Sign.) Date Time Received for Lab by (Sign)	Project Code	Projec	t Name			<del></del>		T					<del></del>	· · · · · · · · · · · · · · · · · · ·
Samplers (Signature)  Mar Knarey And Man Fie Donasek  Malkulay Bir Ham Pathorida  Mar War were of (2- non 10015)  Mar War were of (2- non 10015)  Mar War were of (2- non 10015)  Mar San-wr we					-,	Loise In								
Remarks  Malkaly Bu Han Pathoduch  Mary Bur we for the North State of	Samplers (Sign	nature)						4	<i></i>	<del>/</del> ,	<del></del>	/	•	
ANT-WF-WELL 7 (2-WOM WALLS)  CAN-WF-WELL 7 (2	,		Fere	.)						//	///	//		Remarks
Relinquished by (Sign.) Date Time Received by (Sign)  Relinquished by (Sign.) Date Time Received for Lab by Relinquished by (Sign)  Relinquished by (Sign.) Date Time Received for Lab by Date. Time Received By (Sign)  Relinquished by (Sign.) Date Time Received by (Sign)  Relinquished by (Sign.) Date Time Received by (Sign)	Walkely Bu	Man	Pet	Non	lede									•
CAN-WP-WELL 7 (7-100 Wass)  (WP-SG-LD)  WP-SG-LD?  WP-SG-LD?  WP-SG-LD?  SAN-WP-KG-col - KENTENITE POWDER  Reflinguished by (Sign.) Date Time Received by (Sign)  Relinquished by (Sign.) Date Time Received By (Sign)	SKH-WP-WELL	7 (2-110	d lines	<u> </u>	)						To NE	ANDES	rzek	,Fileson
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SRM \* P. O. Box 3578 \* Billings, Montana \* 406-245-9878

To A.Lab

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Project Code Project Name	
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Samplers (Signature)	Remarks
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38111-WP-5-18-1.5F soil	All squares analyzed for
3Rm-WP-3-19-1.5 F 50:1	All samples analyzed for tetrachlorox hore
3A M-101-5-20-1.5F 50:1	
3R17-10P-5-31 3011	
3R117-10P-3-71 301	
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3RM-WP-C	rimto	2	water	4546	5:00 pm		
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To A. Lab

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Samplers (Signature)	Remarks
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Malhely Brad Harr Pet Workede	
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SRH-WP-WELL of (2- VOA VIALS) ) 1543	TETHACHLORO ETHYLENE AS PER VOA ANALYSIS
SLA-WI- WELL 5 (3- VOA VIALS) } WATER	
SEM-WP-WELL 7 (2-VOA VIALES) 8545	
WP-SG-LD/ 8546	
WP-56-601-1.5F /8547	
WP-56-102 > SOIL 8545	
W1-56-BD1 3549	
WY-S6-88-2 / 8550	
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SRM \* P. O. Box 3578 \* Billings, Montana \* 406-245-9878

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To PSI Lab

Project Code   Project Name   WP - 12 - 0094 - (0)   Remarks    Samplers (Signature)   Remarks    Stills-up- (1) 20 # 98 water, 5:00pm 12-7-87   Analyzy for tetrachloroefficine    SRM-up-well # 9 water, 5:10pm 12-7-87   11   11    SRM-up-well # 11   water, 935pm/2-7-87   11   11    SRM-up-well # 11   water, 935pm/2-7-87   11    SRM-up-well # 11   water, 935pm/2-7-87   11   11    SRM-up-well # 11   water, 935pm/2-7-87   11    SRM-up-well # 11   water, 935pm/2-7-87   11   11    SRM-up-well # 11   water   935pm/2-7-87   11   11   11    SRM-up-well # 11   water   935pm/2-7-87   11   11   11    SRM-up-well # 11   water   935pm/2-7-87   11   11   11   11   11   11   11
Samplers (Signature)  Budley Harr  SAMI-UP- (1) 20 # 98 water, 5:00pm 12-7-87 Analyze for tetrachloroethere  SAMI-UP-Well # 9 water, 5:10pm 12-7-87 "  SAMI-UP-Well # 11 water, 9:35pm/2-7-87 "  11
Brackley Harr  5AM-WP-Well # 9 water, 5:00pm 12-7-87 Analyze for tetrachloroetherse.  5AM-WP-Well # 9 water, 5:10pm 12-7-87 11 11  5AM-WP-Well # 11 water, 4:35pm/2-7-87 11
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58111-1017- (1) = 9 water, 5:00pm 12-7-87 Analyze for tetrachloroetherne.  58111-1017- Well # 11 water, 5:10pm 12-7-87 11 11  58711-1017- Well # 11 water, 9:35pm 12-7-87 11
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SRM \* P. O. Box 3578 \* Billings, Montana \*
T. A. Lab

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Please put all collection information on 196 print out.

SRM-WP   12-0094-CO  Samplers (Signature)  MARK KRALEY   Michiley  SRM-WP-WELLH/2   12/16/87   1:05 pm, water   TETRACHORDE THENE  Relinquished by (Sign.) Date Time Received by (Sign) Relinquished by (Sign) Date Time Received By (Sign)  Relinquished by (Sign.) Date Time Received by (Sign) Relinquished by (Sign) Date Time Received By (Sign)  Relinquished by (Sign.) Date Time Received for Lab by Date Time Remarks	Project Code   Proj	ject Name				7	·····
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SRM \* P. O. Box 3578 \* Billings, Montana \* 406-245-9878

A.A. LABS

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5RM-WP-WELL # 7 E 12/18/87 WATER 3:60-pm.	rt lu
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Project Code Project Name  5RM 12-0094-C01  Samplers (Signature)  Brad Harr Bradler Harr  SRM-WP-Well 14a water 1-B-88 2:20pm Analyze of UOAS
Brad Harr Bradler Harr  SRM-WP-Well 14a water 1-B-88 3:20pm Analyze of 10 A'S
Brad Harr Bradler Harr  SRM-WP-Well 14a water 1-B-88 3:20pm Analyze of 10 A'S
38 M-WP - Well 5a water 1-13-88 12:15pm
38m-WP-Well 6a wroter 1-13-98 11:20 gm "
5RM-WP-Well 17a water 1-13-88 2:55pm 11
58m-WP-5-25 soil 1-13-88 3:30pm 11 please my 501
5RM-WP-5-24a soil 1-13-88 3:20pm 11
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SRM \* P. O. Box 3578 \* Billings, Montana \* 406-245-9878

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# APPENDIX H

SAMPLE COLLECTION SUMMARY

#### APPENDIX H - SAMPLE COLLECTION SUMMARY

Sample ±	Collection Date	Matrix	Laboratory Utilized	Comment	Chemicals Analyzed
SRM-WP #1	11/02/87	Water	I.S.L.	Well Sample	Volatile Petroleum Products
SRM-WP #2	11/02/87	Water	I.S.L.	Well Sample	Volatile Petroleum Products
SRM-WP #3	11/02/87	Water	I.S.L.	Well Sample	Volatile Petroleum Produccs
SRM-WP-W-1001	11/12/87	Water	I.S.L.	Well Sample, Well 1 verification	PCE and 1,1,1 trichloroethan
SRM-WP-W-1002	11/12/87	Water	A.A.	Well Sample, Well 1 verification	PCE
SRM-WP-DE-001	11/12/87	Debris	1.5.1.	Grab Sample, rubber sack material	PCE and 1,1,1 trichloroethan
SRM-WP-DB-002	11/12/87	Debris	A.A.	Grab Sample, rubber sack material	PCE
SRM-WP-W-1003	11/12/87	Water	I.S.L.	Grab Sample, puddled water, East of NET	PCE and 1,1,1 trichloroethan
SRM-WP-NT-1	11/23/87	Soil	P.S.I.	Composite Sample, side of ditch	VOC's
SRM-WP-NT-2A	11/23/87	Soil	P.S.I. (A.A2)	Composite Sample, split sample	VOC's, P.P. metals
SRM-WP-S#13	11/23/87	Soil	P.S.I.	Composite Sample	Voc's
SRM-WP-S#16a	11/23/87	soil	P.S.I. (A.A16)	Composite Sample, split sample	VOC's
SRM-WP-S#11	11/23/87	Soil	P.S.I.	Composite Sample	VOC's
SRM-WP-S#5	11/23/87	Soil	P.S.I.	Composite Sample	VOC's

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Sample Collection Summary, Con't.

Sample #	Collection Date	Matrix	Laboratory Utilized	Comment	Chemicals Analyzed
SRM-WP-Well #6	11/23/87	Water	P.S.I.	Well Sample	VOC's
SRM-WP-Well #8	11/23/87	Water	P.S.I.	Well Sample	VOC's
SRM-WP-Well #1a	11/23/87	Water	P.S.I. (A.A1)	Well Sample, duplicate of SRM-WP-Well #1	VOC's
SRM-WP-Well #4	11/23/87	Water	A.A.	Well Sample	PCE
SRM-WP-Well #5	11/23/87	Water	A.A.	Well Sample	PCE
SRM-WP-Well #7	11/23/87	Water	A.A.	Well Sample	PCE
SRM-WP-SG-LD1	11/23/87	soil	A.A.	Composite Sample, bottom of ditch	PCE
SRM-WP-SG-LD1- 1.5F	11/23/87	soil	A.A.	Composite Sample, taken 1.5' deep, bottom of di	
SRM-WP-SG-LD2	11/23/87	soil	A.A.	Composite Sample, bottom of ditch	PCE
SRM-WP-SG-BD-1	11/23/87	soil	A.A.	Composite Sample, bottom of ditch	PCE
SRM-SG-BD-2	11/23/87	soil	A.A.	Composite Sample, bottom of ditch	PCE
SRM-WP-BG-001	11/20/87	Bentonite Powder	A.A.	Grab Sample of Granular 200 mesh bentonite powd	
SRM-WP-Well #10	C 11/23/87	Water	A.A.	Well Sample taken before purge	PCE
SRM-WP-Well #1	11/23/87	Water	A.A. (PSI-1a)	Well Sample	PCE

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Sample Collection Summary, Con't.

Sample #	Collection Date	Matrix	Laboratory Utilized	Comment	Chemicals Analyzed
SRM-WP-DECON	11/23/87	Water	A.A.	Sample of decontam- ination rinsate	PCE
SRM-WP-S#6	11/23/87	Soil	A.A.	Composite Sample	PCE
SRM-WP-S#7	11/23/87	Soil	A.A.	Composite Sample	PCE
SRM-WP-S#8	11/23/87	soil	A.A.	Composite Sample	PCE
SRM-WP-S#9	11/23/87	Soil	A.A.	Composite Sample	PCE
SRM-WP-S#10	11/23/87	Soil	A.A.	Composite Sample	PCE
SRM-WP-S#12	11/23/87	Soil	A.A.	Composite Sample	PCE
SRM-WP-S#14	11/23/87	Soil	A.A.	Composite Sample	PCE
SRM-WP-S#15	11/23/87	Soil	A.A.	Composite Sample	PCE
SRM-WP-S#16	11/23/87	Soil	A.A.	Composite Sample	PCE
SRM-WP-S#17	11/23/87	Soil	A.A.	Composite Sample	PCE
SRM-WP-NT-2	11/23/87	soil	A.A.	Composite Sample, bottom of ditch	PCE
SRM-WP-NT-4	11/23/87	soil	A.A.	Grab Sample, taken 1.5 feet deep	PCE
SRM-WP-S-18- 1.5 F	11/23/87	soil	A.A.	Grab Sample, taken 1.5 feet deep	PCE
SRM-WP-S-19- 1.5 F	11/23/87	Soil	A.A.	Grab Sample, taken 1.5 feet deep	PCE

Page 3

Sample Collection Summary, Con't.

Sample =	Collection Date	Matrix	Laboratory Utilized	Comment	Chemicals Analyzed
SRM-WP-S-20- 1.5 F	11/24/87	Soil	A.A.	Grab Sample, taken 1.5 feet deep	PCE
SRM-WP-S-21	11/24/87	Soil	A.A.	Grab Sample	PCE
SRM-WP-Drum #1	12/02/87	Water	A.A.	Grab Sample from drummed water-composite of wells 1,4,5,6,7,8	PCE
SRM-WP-Drum #2	12/02/87	Water	A.A.	Grab Sample from drummed water-composite of wells 1,4,5,6,7,8	PCE
SRM-WP-Drum #3	12/02/87	Water	A.A.	Grab sample from drummed water-well 11	PCE
SRM-WP-Well #10 Pit	12/02/87	Water	A.A.	Grab sample from well mud pit	PCE
SRM-WELL #9 Pit	12/04/87	Water	A.A.	Grab sample from well mud pit	PCE
SRM-WP-Well #10	12/07/87	Water	A.A.	Well Sample	PCE
SRM-WP-Well #9a	12/07/87	Water	P.S.I. (A.A.)	Well Sample Duplicate of SRM-WP-Well #9	VOC's
SRM-WP-SG-BD1	11/23/87	Soil	P.S.I. (A.A.)		VOC's for tetrachloroethene and to be analyzed for all VO
SRM-WP-Well #9	3 12/07/87	Water ·	A.A.	Well sample taken from bottom of well before purge, silty sample	PCE

Sample Collection Summary, Con't.

Sample #	Collection Date	Matrix	Laboratory Utilized	Comment	Chemicals Analyzed
SRM-WP-Well #9	12/07/87	Water	A.A.	Well Sample	PCE
SRM-WP-Well #11	. 12/07/87	Water	A.A.	well sample	PCE
SRM-WP-S#22	12/15/87	Soil	A.A.	Soil Sample; depth- 5 ft. at well #13	PCE
SRM-WP-Decon #2	2 12/16/87	Water	A.A.	Drill auger rinse between well 12 & 13	PCE
SRM-SP-Well #12	2 12/16/87	Water	A.A.	Well Sample	PCE
SRM-WP-Well #13	3 12/17/87	Water	A.A.	Well Sample	PCE
SRM-WP-Well 1d	12/18/87	Water	A.A.	Well Sample	PCE
SRM-WP-Well 5d	12/18/87	Water	A.A.	well Sample	PCE
SRM-WP-Well 7d	12/13/87	Water	A.A.	Well Sample	PCE
SRM-WP-Well 9d	12/18/87	Water	A.A.	Well Sample	PCE
SRM-WP-Well 120	1 12/19/87	Water	A.A.	Well Sample	PCE
SRM-WP-Well 130	1 12/18/87	Water	A.A.	Well Sample	PCE
SRM-WP-Well 1e	12/18/87	Water	PSI	Well Sample	VOC's
SRM-WP-Well 5e	12/18/87	Water	PSI	Well Sample	VOC's
SRM-WP-Well 7e	12/18/87	Water	PSI	Well Sample	VOC's

Sample Collection Summary, Con't.

Sample #	Collection Date	Matrix	Laboratory Utilized	Comment	Chemicals Analyzed
SRM-WP-Well 9e	12/18/87	Water	PSI	well Sample	VOC's
SRM-WP-Well 12e	12/18/67	Water	PSI	Well Sample	VOC's
SRM-WP-Well 13e	12/18/87	Water	PSI	Well Sample	VOC's
SRM-WP-SCP-SEW	12/22/87	Water	A.A.	Sewer manhole on Ben- jamin, S of Empl. Offic 4:40 pm	PCE e
SRM-WP-Well 8d	12/31/87	Water	A.A.	well water	PCE
SRM-WP-Well 6d	12/31/87	Water	A.A.	Well Water	PCE
SRM-WP-Well 11i	E 1/08/88	Water	A.A.	Fump Test Water from test on 1/08/88	PCE
SRM-WP-Well 14	1/13/88	Water	A.A.	Well Water	PCE
SRM-WP-Well 15	1/13/88	Water	A.A.	Well Water	PCE
SRM-WP-Well 16	1/13/88	Water	A.A	Well Water	PCE
SRM-WP-Well 17	1/13/88	Water	A.A.	Well Water	PCE
SRM-WP-Well 14	a 1/13/88	Water	SERCO	Well Water	VOC1 s
SRM-WP-Well 15a	a 1/13/88	Water	SERCO	Well Water	VOC" s
SRM-WP-Well 16	a 1/13/88	Water	SERCO	Well Water	VOC*s

Page 6

## Sample Collection Summary, Con't.

Sample ≠	Collection Date	Matrix	Laboratory Utilized	Comment	Chemicals Analyzed
SRM-WP-Well 17a	1/13/88	Water	SERCO	Well Water	VOC's
SRM-WP-S-24	1/13/88	Soil	A.A.	Soil from Silo	PCE
SRM-WP-S-24a	1/13/88	Soil	SERCO	Soil from Silo	VOC's
SRM-WP-S-25	1/13/88	soil	SERCO	Grab from gravel pile by silo	VOC's

I.S.L. = Idaho State Laboratory
A.A. = Analytical Laboratories
P.S.I. = Professional Services Laboratories

SERCO = SERCO Laboratories

= Volatile Organic Compounds, Soils by EPA
 Method SW8240, water by EPA Method 624
= tetrachloroethene VOC

PCE

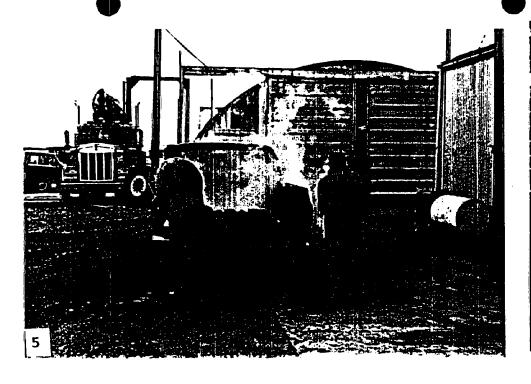
# APPENDIX I

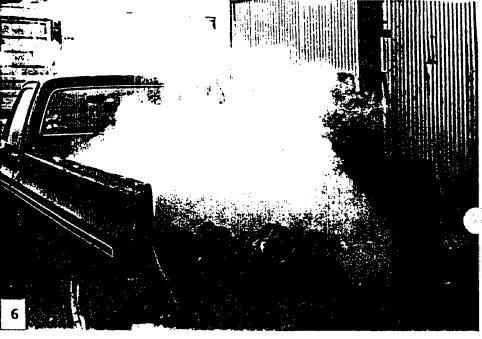
PHOTOGRAPH DOCUMENTATION



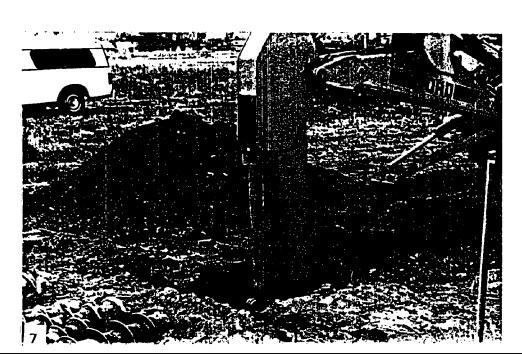


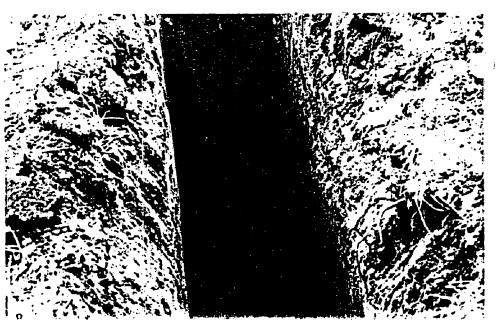




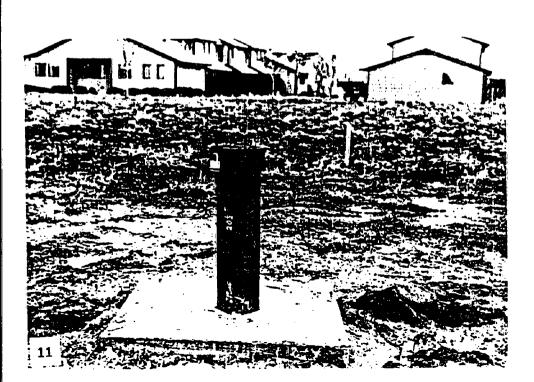


1 - 120 -

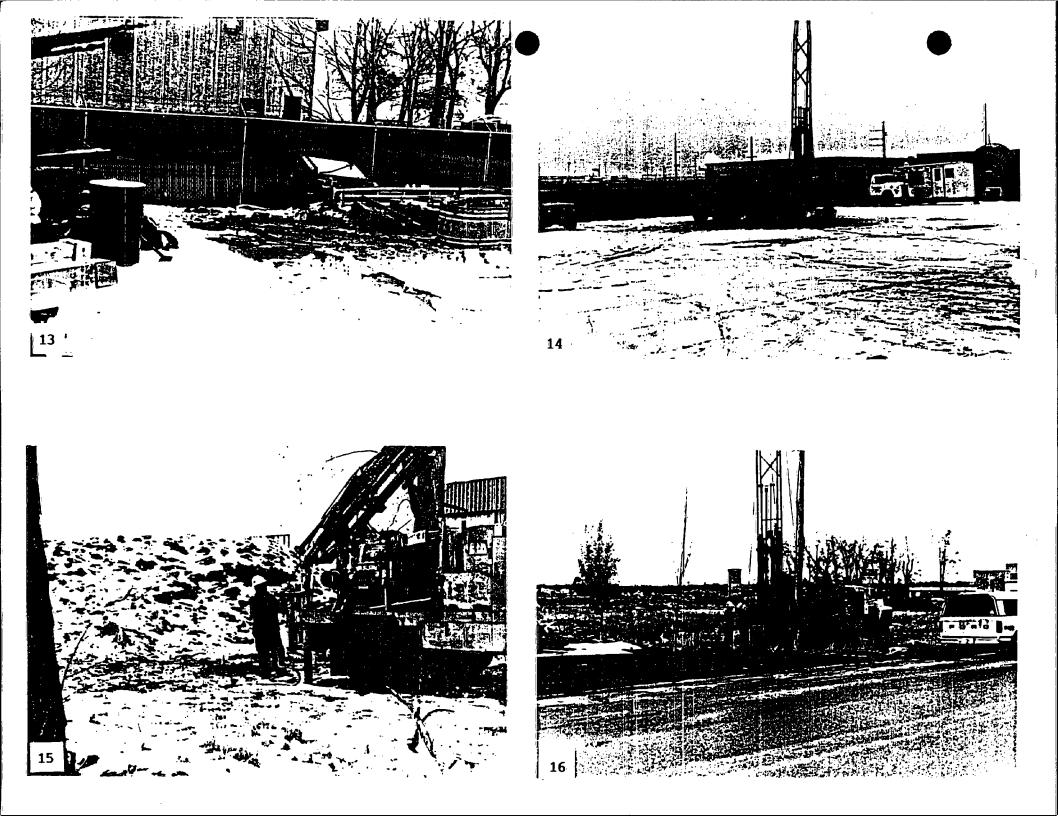


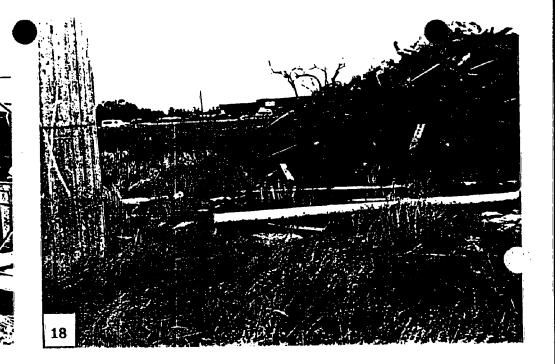














14 - 14 - 17 H



APPENDIX J

WELL LOGS

## DUNDWATER WELL INSTALLATION RE T

SRM Installed By I	3ob J	Well No. SRM #4  Location Cones Drilling Date 11/20/87
		•
LOG OF BO	RING	AND WELL OBSERVATION WELL INFORMATION
BORING		Type of WELL
Description	Symbol	Ground Elev. 304.33 Top of Riser Elev. 306.56
top soil, brown, moist clay, tan-red		Type of Backfill Around Risercuttings
gravel amd medium sand 3" - tan caving silt & clay		Top of Sedi Elev. 299.8  Type of Sedi Material bentonite (200 mesh)  L3
graver 		Top of Filter Elev. 299.  Type of Filter Moterial natural gravel  Size of Openings .020  Diameter of Screened
		Bottom of Baring Elev. 287
	no Installed By I of Installed installation _Auger 8-10 ft/ - Compared LOG OF BO  BORING  Description  top soil, brown, moist clay, tan-red  gravel amd medium sand 3" - tan caving silt & clay  gravel	af Installation _Auger 8-10 ft/ - Completed By Bob J  LOG OF BORING  BORING  Description   Top    top soil, brown, moist  clay, tan-red  gravel and medium sand 3" - tan caving  silt & clay  gravel

Inspected By

# STATE OF IDAHO DEPARTMENT OF WATER RESOURCES

#### ₩ELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the complement of the well.

1. WELL OWNER	į ,	WAT	EA LE	VEL						
Name Special Resource Hanagement Inc		Static	water	level	9.6 feet beld	ow lan	d surface.		•	
Nome Special Resource Hanagement Inc. Address 200 N 4 th St. Sule 206 Boise 10740		Flow	ng? (	IJ Yes	D-NG G.P.A	M. flov	V		_	
Owner's Permit No. 63-87-Z-086		Contr	olled b erature	y:   	☐ Valve ☐ Cap ☐F. Quality resion or temperature	0	Plug			
2. NATURE OF WORK	8.	WELI	L TEST	DAT	Ä					
ID New well □ Despened □ Replacement		() Pu	тр	0	Baller 🛭 Air		Other		_	
<ul> <li>Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)</li> </ul>		Discharg	M.C.D		Pumping Level		Hours Pu	mped		
					<del> </del>		<del></del>			
3. PROPOSED USE				=	<u>:</u>					
☐ Domestic ☐ Irrigation ☐ Test ☐ Municipal	9.	LITH	OLOG	IC LO	g # 10		<del></del>	-		
☐ Industrial ☐ Stock ☐ Weste Disposal or Injection ☐ Other Hon. Locusty (specify type)	Bore	_	eth	J	<del></del>			Water		
Some Tibertain (Abella	Diam.	From	4		Materi July 3		<del>д —</del>	Yes	20	
4. METHOD DRILLED	7									
□ Rotary □ Air □ Hydraulis □ Reverse rotary □ Ceble □ Dus □ Other	4				one sand e	•				
2 0000 2 0000	4	7.8	20	ري (	CALR ZAMA	1.9	riques	~	$\vdash$	
5. WELL CONSTRUCTION	3	20	43	20	th occasio	9	ravel	4		
Casing schedule: D'Steel   Concrete D'Other 12VC				Γ –				$\square$		
0.25 inches 4 inches + 0 feet 20 feet	3_	4.3	45	3	117 : 40	10_	Sand		י	
Inches Inches feet feet 5th, 40 Inches 2 Inches 0 feet 45 feet								H		
Unches Inches I										
Was a packer or seel used? ☐ Yes ☐ No										
Perforated? ☐ Yes ☐ Nō How perforated? ☐ Factory ☐ Knife ☐ Torch								$\Box$		
Size of perforation inches by Inches										
Number From To										
perforations feet									_	
Well screen installed? Blog   No   No   Manufacturer's name   Horophillic					· · · · · · · · · · · · · · · · · · ·					
Type PVE Model No					<del></del>		<del></del>	$\vdash \vdash$	-	
Dismeter 2" Slot size 22 Set from 25 feet to 40 feet Dismeter Slot size Set from feet to feet									_	
Gravel packed? ** O Yes O No O Size of gravel ** Sand *** P Placed from O Yes Geet to 45 Geet				=						
Surface seel depth 12 Material used in seel:     Coment grout					<del></del>		<del></del>	$\vdash$	-	
Seeling procedure used:								$\Box$		
Overbore to seel depth Method of joining casing: ☐ Threaded ☐ Welded ☐ Solvent										
Weld							<del></del>			
Describe access port	10.									
		Wo	rk stort	bed	12/3/87 Mm	ished	12/3/8	37	_	
6. LOCATION OF WELL	11.	DRIL	LERS (	CERT	IFICATION	•				
Sketch map location <u>must</u> agree with written location. N			•		all minimum well o te time the rigwas r			ds we	re	
Subdivision Name		Elem A	ا ـــ،	26	etP Jours 4	A D EL	-45	3		
w					BOSE HALL				-	
Lot No Black No		Addre	# <u>_3</u>	<u>368</u>	DOO'T TOWN	う(*	14 14 11	<u> </u>	-	
		Signed	by (Fi			(ن	yos.		-	
County S Arda			4	and Open	K 1	ノト	Joean			
NE & SW & See 12 T. 3N N/Z R. 1 EAR			t,	- peri			/		- [	

### DEPARTMENT OF WATER RESOURCES

#### ELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1, WELL OWNER	7.	WATE	RLEV	EL	1			
Name Special Resources Hovegenest Inc.  Address 200 N 4 St. Suite 206.  BOISE, 1 DAND 82702  Owner's Permit No. 63-87-2-081		Static	water le	evel 10. 2 feet below land surface.	l			
300 NUEST Sub 200	Flowing? Tyes DMG G.P.M. flow							
Address ZOO N 4 of Juste LCG		Artesian closed-in pressure p.s.l. Controlled by: D Valve D Cap D Plug						
Owner's Permit NoG3B77081		Tempo	rature	OF, Quality				
			TEST					
2. NATURE OF WORK	<b>.</b>							
□ New well □ Deepened □ Replacement □ Abandoned (describe abandonment procedures such as		(J Pui	mp ———	□ Bailer □ Air □ Other				
materials, plug depths, etc. in lithologic log)	C	discharge	G.P.M.	Pumping Level Hours Pu	mped			
3. PROPOSED USE								
□ Domestir: □ Irrigation □ Test □ Municipal		1.1714	01.061	clos #9				
☐ Industrial ☐ Stock ☐ Weste Disposal or Injection		Dec		7	Water			
Dother Mon. foring (specify type)	Diam.	From	To	Material	Yes No			
4. MÉTHOD DŘILLÉĎ	4	0	5_	5. Ity sand brown				
☐ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary	4	3	10.2	Coarse Sarro : grave	ᄪᆜᅴ			
Cable Dug Other	Z4-	10.2	20	course suns i gravet	<del> - -</del>			
T WELL ADJOURNATION	,'	-						
5. WELL CONSTRUCTION		20_	34					
Casing schedule: Steel Concrete Other PVC Thickness Diameter From To	3"	39_	45	Silty Sand	- -i			
0.75 inches 4 inches + 0 feet 20 feet		-	<del></del>		世上			
Sch. 40 inches 2 inches 0 feet 45 feet	_				<del> </del>  -			
inches inches feetfeet		_			1_1			
Was casing drive shoe used? □ ✓es □ No Was a packer or seal used? □ ✓es □ No		=						
Perforated? ☐ Yes ☐ No		<del> </del> -	<del> </del> -					
How perforated?								
Number From Te		<del> </del>			<u> </u>			
perforationsfeetfeetfeetfeetfeetfeetfeetfeetfeetfeetfeetfeetfeetfeetfeetfeetfeet					<del>-  - </del>			
perforations feet feet  Well screen installed?					<u> </u>			
Well screen installed? Byes No No Manufacturer's name Hydrophilic	<u> </u>				+			
Type /3/2 · Model No.		<u> </u>	<del></del>					
Diameter 2" Stot siz 0.02 Set from 20 feet to 40 feet Diameter Stot size Set from feet to feet to		<u> </u>			╌╢╾╾┼╴╵			
Gravel packed? The No Size of gravel 8 Send								
Placed from		-						
Strentonite    Puddling clay		-			7-1			
Sealing procedure used: Slurry pit  Temp, surface casing	-	<del> </del>	<del> </del>		+=+			
Method of joining casing: (9 Threaded   Welded   Salvent   Weld								
Comented between strate	-	ا	1					
Describe access port	10	i. Wa	ork stær	ted 12/5/87 Anished 12/5/8	2			
	+							
8. LOCATION OF WELL	11			CERTIFICATION  that all minimum well construction stand	خمضي وإجروا			
Sketch map location must agree with written location. N		I/We	certify	that all minimum well construction stand that the time the rigwas removed.	लक संबर			
Subdivision Name				Pobert P James G Firm No. 4	<b>'</b> 53			
			P	DO BOX	- <u>-</u> -			
W : X : E		Addr	ess	( )( )	קטיר			
Lot No Block No		Signe	rd by (F	irm Official)				
County S Ada				and Co. 10	_			
				(Operator). Kultur V	حبور			
NE & SUU & See. 12 T. 3 N/5/ R. /_ ENT.	1			-				

### DUNDWATER WELL INSTALLATION RE T

	r 8-10 ft/ - Comp	Jones Drilling Date 11/20 Time 10:20-1:30 plete with hollow stem auger
BORING	LOG OF BORING	OBSERVATION WELL INFORMATION  Type of WELL
top soil, tan clay, tan, dry  gravel with silt & tan - red  silt & clay	λS	Ground Elev. 303.81  Top of Riser Elev. 306.22  Vented Cap  Li. 2.4  Li. 2.4  Li. 4.5  Li. 11.8  Li. 14.9  Li. 14.9  Li. 17  Top of Seal Elev. 299.8  Type of Seal Material bentonite (200 mesh)  Type of Filter Material natural gravel  Size of Openings 020  Diameter of Screened  Tip 2"  Battom of Well Elev. 28

Inspected By\_\_\_\_\_

# JUNDWATER WELL INSTALLATION REI

	LOG OF BOR	RING	AND WELL
	BORING		OBSERVATION WELL INFORMATION Type of WELL
in fe.	Description	Symbol	Ground Elev. 301.74 Top of Riser Elev.304.27  Vented Cap
-1-6-4-1	top soil, tan silty clay, tan		LD. of Riser Pipe 2"  Type of Pipe PVC  Bell end
5 -	gravel with silt & clay tan-red 4"-		Type of Backfill Around Riser_cuttings
0 -	<del>-</del> sand		Top of Seal Elev. 296.7  Type of Seal Material bentonite (200 mesh
5 =			Le. 4.3 L717 Top of Filter Elev. 296.3
ם •			Type of Filter Moterial
0 _	•		Diameter of Screened Tip_2"
			Bottom of Well Elev.21

Inspected By \_\_\_

# DUNDWATER WELL INSTALLATION RE' T

Location Date 11/20/87 Time 11:20 = 4:3  stem auger  TION WELL INFORMATION  Top of Riser Elev. 305.24  Vented Cap
TION WELL INFORMATION  Top of Riser Elev. 305.24  Vented Cap
Top of Riser Elev. 305.24  Vented Cap
Top of Riser Elev. 305.24  Vented Cap
-Vented Cap
"  <u> </u>
Type of Backfill Around Riser_cuttings
Top of Seal Elev. 301.7  Type of Seal Material bentonite (200 mesh
Top of Filter Elev. 301.2  Type of Filter Material  natural gravel
Size of Openings .020
Battom of Well Elev. 28

Inspected By-

# JUNDWATER WELL INSTALLATION REF

	SDM		Well No. SRM #8				
Djest	No Installed By Bo	b J	Location     Time   11:45-5:45				
Project	No mstured by						
Method	of Installation Auger to 8 - 10 ft.	_=_	complete with notice stem adder				
<del></del>							
	LOG OF BOR	ING	3 AND WELL ·				
	BORING		OBSERVATION WELL INFORMATION Type of WELL				
	•	r=-					
Depth in ft.	Description	Symbol	Ground Elev. 303.99 Top of Riser Elev. 306.45				
	topsoil, tan to brown						
	silty clay, tan	İ	ID. of Riser Pipe 2"				
-			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
<b> </b>			BALL END				
	silt and sand, red-brown		Type of Backfill Around				
	gravel with silt and clay, red-brown 4"-		Riser <u>Cuttings</u>				
	Ted -brown		301.4				
F			Top of Seal Elev. 301.4  Type of Seal Material				
10			L <sub>1</sub> • 2.6 Type of Seal Material bentonite (200 mesh)				
-			L <sub>3</sub> · .5   L <sub>3</sub>	} -			\( \langle \frac{13.1}{14.4} \\ \langle \rangle \]   \( \rangle \frac{1}{3} \\ \rangle \rangle \rangle \]   \( \rangle \frac{1}{3} \\ \rangle \rangl
15		}	Lo. 14.4 Lo. 4.3				
			L <sub>7</sub> . 17.5 Top of Filter Elev. 300.9				
_ TD .	sand .		Type of Filter Material				
} .		l	natural gravel				
29			Size of Openings .020				
			Digmeter of Screened				
<b>.</b>			Tip2"				
·	·		Bottom of Well Elev. 287.				
[	]		1 (2004)				
<u> </u>		<u> </u>	Bottom of Boring Elev. 286.5				
	<u>                                     </u>		Diameter of Boring 6"				
temar	ks						
			· · · · · · · · · · · · · · · · · · ·				

## GROUNDWATER WELL INSTALLATION PORT

			·
	LOG OF B	ORING	OBSERVATION WELL INFORMATION  Type of WELL Observation well
Depth in fit.	Description	Symbol	Ground Elev
5' Seed 5'	contact of growel  aravel  timent layer, sandy silt of  roll growels.		Type of Pipe

### GROUNDWATER WELL INSTALLATION REPORT

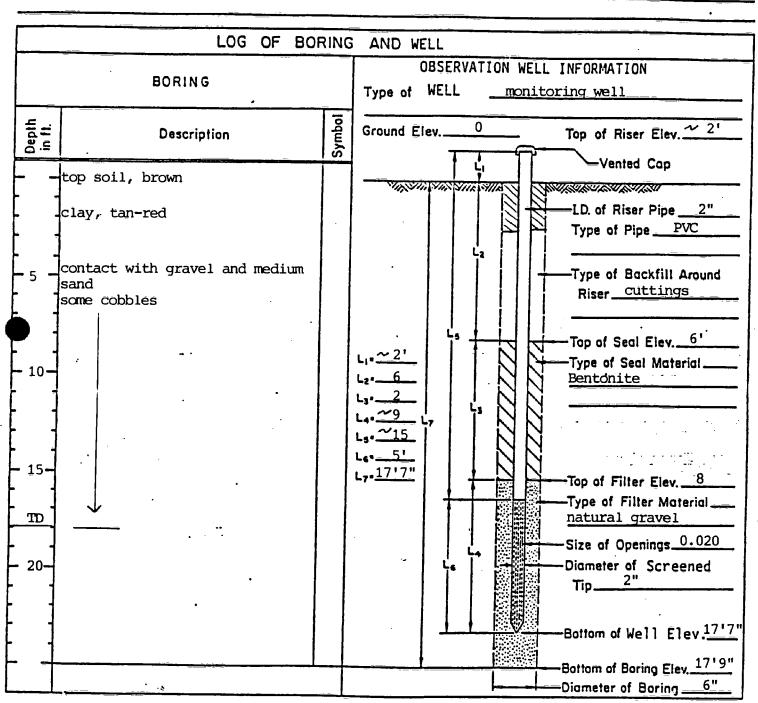
	LOG OF BOF	RING	
	BORING		OBSERVATION WELL INFORMATION  Type of WELL Observation well
Depth in ft.	Description	Symbol	Ground ElevTop of Riser Elev
43	contact up gravel		Type of Pipe Promise  Type of Pipe Promise  Type of Seal Elev. 16  Type of Seal Material  Sand  Size of Openings O. O  Diameter of Screened  Tip  Bottom of Well Elev.
45'	bottom of hole		Bottom of Boring Elev.
			Diameter of Boring 3

## COUNDWATER WELL INSTALLATION REPORT

	Special Resource Management  No Installed By Ril  of Installation Robus drilling wair	Location Marker - Dale  Location Marker - Dale  Date 12.4-67 Time  - driving casing
	LOG OF BORIN	
	BORING	OBSERVATION WELL INFORMATION  Type of WELL Observation well
Depra in fi.	Description 6	Ground Elev Top of Riser Elev
	contact up gravel  gravel  contact layer  bottom of hole	Top of Filter Elev. 23  Type of Openings Q.QZ  Diameter of Screened  Tip
		Diameter of Boring 3
mark	s 5 ft sump, 15 ft of	
	20 ft surface casing (	<u> </u>

#### OUNDWATER WELL INSTALLATION R. T

	Well No. 12
Project SRM	Location Westpark
oject No Installed By E	Location Westpark Completed Completed Time
Method of InstallationHollow stem auger;	bore hole was drilled 4 to 5 days before well
installation; drill	rig mechanical problems.



Remorks elevations are given in distance from ground surface, survey data not available at time of logging, 2 ft. bentonite seal at top of well

	_
Inspected	Ву

# COUNDWATER WELL INSTALLATION R. .RT

Method of Installation Backhoe to 8 ft., completed with hollow stee	ntionWestpark 12-15-87Time~11:00 - 5:0 em auger
LOG OF BORING AND WELL  BORING  Description  top soil, brown clay, tan-red  contact w/gravel  10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	
BORING  BORING  Description  Type of WELLm  Ground Elev0  top soil, brown clay, tan-red  contact w/gravel  10-  Li	·
Description  Type of WELL  Type of WELL  Type of WELL  Ground Elev.  Ground Elev.  Contact w/gravel  Contact w/gravel  L2  L3  L4  9' L5  L5  L5  L5  L5  L5  L5  L5  L5  L5	
top soil, brown clay, tan-red  contact w/gravel  5  10  Li* 2' Li* 7 Li* 2' Li* 9' Li* 9' Li* 9' Li* 5' Li* 5'	WELL INFORMATION CONITORING Well
clay, tan-red  contact w/gravel  10  L <sub>1</sub> * 2'  L <sub>2</sub> * 7  L <sub>3</sub> * 2'  L <sub>4</sub> * 9'  L <sub>5</sub> * 15'  L <sub>6</sub> * 5'	Top of Riser Elev. ~ 2
sand, gravel and cobbles	1 1
morks elevations are given in distance from ground surface, 2	ft. bentonite seal at
top of the well, hole dug to 8 ft. with backhoe due to	drilling difficulties

### JUNDWATER WELL INSTALLATION RE .T

					No	
Special Res	ource Management	Nort	hom Testing	Location		
oject Na			Hern leschiq	Date	7-08	Time12:00 pm
Method of Installation $\frac{8}{100}$	" hollow stem au	ger				
<u></u>	<del></del>		<del></del>	<del></del>		
			<del></del>		· · · · · · · · · · · · · · · · · · ·	
			<del></del>			
	LOG OF BO	RING	AND WELL	-		
BOR	NG ,		OBSER Type of WELL	VATION WELL monito		AATION
Dept 1. Desc	cription	Symbol	Con- Elev. 20	690.48_	_	f steel 2692.43 casing Elev.
asphalt gravel fill Silty clay responds to the silt of	ty clay		2'10" 12'6'6" 13'-8" 14'-9'6" 17'10"		Top of Type Dent  Top of Dent	of Filter Elev. 7'8" of Filter Elev. 7'8" of Openings
	ents taken from sand placed belo					<del></del>
	surface seal wit			pad		
	ng and locking c					· · · · · · · · · · · · · · · · · · ·

Inspected By\_\_\_\_

Description  Tree  Casing Elevented Cap  Casing Elevented Cap  Casing Elevented Cap  Casing Elevented Cap  Lipe of Pipe  FVC - Johnson  Type of Backfill  Riser cutting  Riser cutting  Type of Seal Elevented Cap  Type of Seal Elevented Cap  Type of Riser Pipe  Type of Seal Elevented Cap  Top of Seal Elevented Cap  Top of Seal Elevented Cap  Top of Filter Elevented Cap  Top of Filter Elevented Cap  Top of Filter Elevented Cap  Top of Filter Elevented Cap  Top of Filter Elevented Cap  Top of Filter Elevented Cap  Top of Filter Elevented Cap  Top of Filter Elevented Cap  Top of Filter Elevented Cap  Top of Filter Elevented Cap  Top of Filter Elevented Cap  Top of Filter Elevented Cap  Top of Filter Elevented Cap  Top of Seal Elevented Cap  Top of Seal Elevented Cap  Top of Seal Elevented Cap  Top of Seal Elevented Cap  Top of Seal Elevented Cap  Top of Seal Elevented Cap  Top of Seal Elevented Cap  Top of Seal Elevented Cap  Top of Seal Elevented Cap  Top of Seal Elevented Cap  Top of Seal Elevented Cap  Top of Filter E	oject No	Special Resource Management Installed By stallation 8" hollow stem au	Northern Testing	Location Date 1-9	Westpark -89 Time	2:18 pm
silty clay - red brown  LD. of Riser Pipe Type of Pipe PVC - Johnson  Type of Sed Elev. Type of Sed Met bentonite (20  1 to 4 inch 15 — sand layer (heaving) sand & gravel  TO  Bottom of Well I		·	OBSER			•
Loof Riser Pipe Type of Pipe PVC - Johnson Type of Sed Elev. Type of Sed Mathematics (20  - large gravel 1 to 4 inch - sand layer (heaving) sand & gravel  TO  - large gravel 1 to 4 inch - 15 - sand layer (heaving) sand & gravel  - large gravel -	Depth in ft.	Description	Crete	691.80	— casin	g Elev.
Bottom of Boring E	5 - Ca ha	aliche ard clay, sand, gravel ravel & silt 	L <sub>1</sub> = ~2'5"  L <sub>2</sub> = _6'4"  L <sub>3</sub> = _2'  L <sub>4</sub> = _9'3"  L <sub>5</sub> = _10'  L <sub>6</sub> = _10'  L <sub>7</sub> = _17'10"		Type of Pipe PVC - John Type of Back Riser	Pipe 1.85 inson  Afill Around trings  Flev. 6'4"  Material (200 mesh)  Elev. 8'4"  Ar Material aings 020  Screened in .  Il Elev. 17

Inspected By \_\_\_\_

### OUNDWATER WELL INSTALLATION R' - RT

!	Special Resource Management	•		Well Location	No Westr	
oject L	lo Installed By_	Nort	hern Testing	Date 1-1	0-83	Time8:20 am
	f Installation 8" hollow stem au					
ernoa o					<del></del>	
				<del></del>		
<del></del>						
	LOG OF BO	RING	AND WELL	<del></del>		
	BORING	T- T-	OBSERVAT	ION WELL monito		MATION
ے ا	·	2	Con- Elev. 2691	.51	Top	of steel 2693.50
Depth in 19.	Description	Symbol	crete			casing Elev. Vented Cop
0 -	Top soil - dark brown		VINSTIN VINSTILE			2000 1 95 i
-	—light red clay - silt					of Riser Pipe 1.85 i
			.   1	·       <u> </u>	Tvne	e of Backfill Around
5	—wet clay				Ris	er_cuttings
}			.		Top	of Seal Elev. 6'
Ţ	= sand, gravel with silt		<u>"1'2-م،ا</u>	00	—— тор Туре	of Seal Material
10-	•		L2"-6'	-00	ben	tonite (200 mesh)
1	•		1 2'4"	, NN		
]			14-8'4" L7		•	
4			Le. 5'	NN		
15-	•	1	L7-17'10'		Тор	of Filter Elev. 8'4"
- 1	•		1		Тур	e of Filter Material
TD						ural gravel
]		1		•		of Openings 020
20-			~ \ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\		Dian 	neter of Screened
	•				Tip	2.37 in.
1	•				<del></del> Bott	om of Well Elev. $\frac{1}{2}$
}						•
+					Botto Dian	om of Boring Elev. 17 <sup>11</sup> neter of Boring 8 <sup>1</sup>
<u>l</u> _	and I manuscrate taken from	٠٠٠٠	ind surface			
marks	well measurements taken from 6" of silica sand placed belo	or pe	entonite	•		
	6" bentonite surface seal with			d		
·	6" steel casing and locking of					

### DUNDWATER WELL INSTALLATION RE T

	of Installation 8" hollow stem aud	RING	
·	BORING		OBSERVATION WELL INFORMATION  Type of WELL monitoring
Depth in ft.	Description	Symbol	Con- Elev. 2689.03 Top of steel 2690.99 crete casing Elev.
- 5 -	Top Soil - light brown  Red Clay  small gravel & silt (.5 to 1 inch gravel)  - 2 inch gravel and silt  sand and gravel (heaving)		Ling of Riser Pipe 1.85 i Type of Pipe  Type of Backfill Around Riser cuttings  Tap of Seal Elev. 6'0"  Type of Seal Material bentonite (200 mesh)  Top of Filter Elev. 8'0"  Type of Filter Material natural gravel  Size of Openings 020  Diameter of Screened  Tip 2.37 in.  Bottom of Well Elev. 16'0"  Bottom of Boring Elev. 17'10
	well measurements taken from o	rou	nd surface

### APPENDIX K

WELL DRILLING PERMITS

Drilling Status	SRM Well Number	Depth	Location (T3N;R1E;Sec 12)
Completed Completed Completed Completed Completed	SRM-WP-W-004 SRM-WP-W-005 SRM-WP-W-006 SRM-WP-W-007 SRM-WP+W-008	<pre> 2 17 feet 2 17 feet 2 16 feet 3 17 feet 3 17 feet 4 17 feet</pre>	a d c d a c a d c d a c a d c

We would like to hold the unused permits in case additional deep wells are desired in the previously permitted locations. It's my understanding that the permits are valid for two months after the date of issuance. The attached map should help clarify the new locations and well numbering.

please call me if you need further information or have any questions.

Sincerely,

SPECIAL RESQUECE MANAGEMENT

Bradley Harr

Client Service Representative

Attach.



November 17, 1987

John Carlson
Department of Water Resources
Statehouse
Boise, ID 83720

Dear Mr. Carlson:

Attached for your review and action are seven monitoring well permit applications. The wells are to be utilized for groundwater quality monitoring on properties proposed for commercial development. All of the wells are located in section 12 of Township 3 North, Range 1 East. The attached map shows the proposed general location for the wells (+ 20 yds.). The exact location will be determined in the field giving consideration to irrigation laterals and utility rights-of-way.

The wells will be drilled to depths of 20 to 50 feet depending on site specific conditions. Well construction will will vary with the types of material encountered during drilling. Our preferred construction will utilize 4 inch steel pipe, a natural sand and gravel filter pack (saturated zone), sodium bentonite (saturated and unsaturated zone), and cement (top three feet). The placement of well screens will be determined in the field during well drilling. The attached diagram shows a general cross section for the type of well we will attempt to install. Attached to each application is an alternative design in case we encounter problems driving and pulling the casing.

At this time, it is uncertain if the wells will be abandoned in the near future (-1 to 2 years). If the wells are to be abandoned, they will be sealed with a sand and portland cement grout.

If you have any questions, please call me.

Sincerely,

SPECIAL RESOURCE MANAGEMENT

Bradley Harr

Client Service Representative

Encs.

BH1.270.1

Drilling Permit	<u>63-87-2-081</u>
Water Permit No.	
Injection Permit	No.

# State of Idaho Department of Water Resources

SRM-WP-W-005

### DRILLING PERMIT

new SRM #

(Authorizing Construction of a Well)\*

SRA-WP-W-009

1.	Applicant Special Resource Management, Inc.
2.	Address 200 N. 4th, Suite 206
	Boise, ID 83702
	( ) Well Owner ( ) Well Operator (x) Other, specify Environmental Con
3.	Water right permit no. N/A ; Injection well permit no. N/A
4.	Proposed well location C 1/4 a 1/4 C 1/4, or Gov't lot No,
	Sec. 12 , Twp. 3N , Rge. 1E , County Ada ,
•	Lot, block and subdivision
5.	Proposed use of well: (Check all that apply)
	( ) Domestic ( ) Stockwater ( X) Monitoring
	() Irrigation () Industrial () Municipal
	( ) Injection ( ) Other, Specify
6	Well construction information:
	(X) New well ( ) Deepen ( ) Replace
	Proposed surface diameter 3.5 inches Proposed depth 30 to 50 feet
	Anticipated bottom hole temperature:
	(x) 85°F or less (Cold water well) ( ) 85°F to 212°F (Low temp. geothermal well) ( ) 212°E or more (Geothermal well)
7.	Anticipated construction start date November 18, 1987
8.	Well Driller (if known) (Possible) Jones R P Drilling Co.
	Address 3328 Scenic Dr., Boise, ID
	Date 11/13/87 · Applicant's signature budley h Harr
	.TitleSr. Client Service Representative

<sup>\*</sup> After other pre-requisite approvals have been obtained.

The approval of this permit authorizes the construction of a well as described on this application subject to the conditions on this permit.

#### GENERAL CONDITIONS:

- The well must be constructed in compliance with the applicable statutes, specific conditions of approval shown on the water right permit, injection well permit, transfer or amendment and the rules and regulations of the Department for water appropriation, injection wells and well construction standards.
- 2. This drilling permit is valid for two (2) months from its date of issuance for the start of construction and is valid for one (1) year from the date of issuance for completion of the well unless an extension has been granted.
- 3. The permit holder or his representative shall notify the Department ten (10) days prior to the start of construction unless good cause for later notification can be shown.
- 4. The well shall be constructed by a driller currently licensed in the State of Idaho who must maintain a copy of the drilling permit at the drilling site.
- 5. Issuance of this drilling permit does not authorize trespass on the land of another party.
- 6. This permit does not constitute other local, county, state or federal approvals which may be required for construction of a well.

#### SPECIFIC CONDITIONS:

- 7. Item 3 above is not required.
- 8. The well shall be constructed by a licensed driller.
- 9. A minimum surface seal of 18 feet shall be provided unless approval for less is granted.
- 10. The Department shall be notified when the wells are abandoned.
- 11. Abandonment shall be as specified in the November 17, 1987 letter or as approved by the Department.

Dated this $\frac{19\pm 1}{2}$ day of $\sqrt{2}$	Vovember, 1987.
	Signed John Beal
	Title SECTION MANAGER GROUNDWATER PROTECTION
Receipted by <u>rg</u> Fee	7
Receipt No. 4570/	Construction start date
Construction start extension to	
Extension approved by	· · · · · · · · · · · · · · · · · · ·

Drilling Permit	1.	63-87-2-086
Water Permit No	•	
Injection Permi	t No.	• •

# State of Idaho Department of Water Resources

SRM-WP-W-0010

#### DRILLING PERMIT

(Authorizing Construction of a Well)\*

1.	Applicant Special Resource Management, Inc.
2.	Address 200 N. 4th, Suite 206
•	Boise, ID 83702
	( ) Well Owner ( ) Well Operator (X) Other, specify Environmental Co
3. 4:	Water right permit no. N/A; Injection well permit no. N/A  NW NE SW  Proposed well location b 1/4 0 1/4 C 1/4, or Gov't lot No
_	Sec. 12 , Twp. 3N , Rge. 1E , County Ada
	Lot, block and subdivision
5.	Proposed use of well: (Check all that apply)
	( ) Domestic ( ) Stockwater (X) Monitoring -
	() Irrigation () Industrial () Municipal
•	( ) Injection ( ) Other, Specify
6.	Well construction information:
	(x) New well () Deepen () Replace  5.0 to 50 feet
	Proposed surface diameter 3.5 inches Proposed depth 30 to 50 feet
	Anticipated bottom hole temperature:
	(x) 85°F or less (Cold water well) ( ) 85°F to 212°F (Low temp. geothermal well) ( ) 212°F or more (Geothermal well)
7.	Anticipated construction start date November 18, 1987
8.	. Well Driller (if known) (Possible) Jones R P Drilling Co.
	Address 3328 Scenic Dr., Boise, ID
	Date 11/13/87 Applicant's signature Budley () Harr
••	.Title Sr: Client Service Representative

\* After other pre-requisite approvals have been obtained.

The approval of this permit authorizes the construction of a well as described on this application subject to the conditions on this permit.

#### GENERAL CONDITIONS:

- 1. The well must be constructed in compliance with the applicable statutes, specific conditions of approval shown on the water right permit, injection well permit, transfer or amendment and the rules and regulations of the Department for water appropriation, injection wells and well construction standards.
- 2. This drilling permit is valid for two (2) months from its date of issuance for the start of construction and is valid for one (1) year from the date of issuance for completion of the well unless an extension has been granted.
- 3. The permit holder or his representative shall notify the Department ten (10) days prior to the start of construction unless good cause for later notification can be shown.
- 4. The well shall be constructed by a driller currently licensed in the State of Idaho who must maintain a copy of the drilling permit at the drilling site.
- 5. Issuance of this drilling permit does not authorize trespass on the land of another party.
- 6. This permit does not constitute other local, county, state or federal approvals which may be required for construction of a well.

#### SPECIFIC CONDITIONS:

- 7. Item 3 above is not required.
- The well shall be constructed by a licensed driller.
- 9. A minimum surface seal of 18 feet shall be provided unless approval for less is granted.
- 10. The Department shall be notified when the wells are abandoned.
- 11. Abandonment shall be as specified in the November 17, 1987 letter or as approved by the Department.

Dated this _	/9±6 day of _/	Vovember	, 19 <u><i>8</i> 7</u>
·		Signed Jelic	Bed
. *		Title SECTI	ON MANAGER ATER PROTECTION
<del></del>		7 //-	NICK PROTECTION:
Receipted by	<u>/ :;</u> Fee _	70 : //s Date	111 8187
Receipt No.	-15151	Construction start of	late
Construction	start extension to		
Extension app	proved by		·

orilling 1	Permit N	ю. 6	3-87-	- Z - <i>O</i> 82
tater Peri	nit!	,		
Injection	Permit	No.		

### State of Idaho Department of Water Resources

### DRILLING PERMIT

new #

(Authorizing Construction of a Well)\*

1.	Applicant Special Resource Management, Inc.	•
	Address 200 N. 4th, Suite 206	
	Boise, ID 83702	* . •
•	( ) Well Owner ( ) Well Operator (X) Other, specify Environmental (	Consultant
3.	Water right permit no. N/A ; Injection well permit no. N/A SF	
4	Proposed well location b 1/4 C I/4 d 1/4, or Gov't lot No.	
	Sec. 12 , Twp. 3N , Rge. 1E , County Ada	
٠.	Lot, block and subdivision	• • • • • • • • • • • • • • • • • • • •
5.	Proposed use of well: (Check all that apply)	• .
	( ) Domestic ( ) Stockwater ( X) Monitoring:	
	( ) Irrigation ( ) Industrial ( ) Municipal	
	( ) Injection ( ) Other, Specify	•-
6.	Well construction information:	٠
	(X) New well () Deepen () Replace	
•	Proposed surface diameter 3.5 inches Proposed depth 30 to 50 feet	
	Anticipated bottom hole temperature:	-
	<pre>(x) 85°F or less (Cold water well) ( ) 85°F to 212°F (Low temp. geothermal well) ( ) 212°F or more (Geothermal well)</pre>	
7.	Anticipated construction start date November 18, 1987	
8.	Well Driller (if known) (Possible) Jones R P Drilling Co.	٠
	Address 3328 Scenic Dr., Boise, ID	
	Date 11/13/87 Applicant's signature Budley W. Harr	·
	.TitleSr. Client Service Representative	·

<sup>\*</sup> After other pre-requisite approvals have been obtained.

The approval of this permit authorizes the construction of a well as described on this application subject to the conditions on this permit.

#### GENERAL CONDITIONS:

- The well must be constructed in compliance with the applicable statutes, specific conditions of approval shown on the water right permit, injection well permit, transfer or amendment and the rules and regulations of the Department for water appropriation, injection wells and well construction standards.
- 2. This drilling permit is valid for two (2) months from its date of issuance for the start of construction and is valid for one (1) year from the date of issuance for completion of the well unless an extension has been granted.
- 3. The permit holder or his representative shall notify the Department ten (10) days prior to the start of construction unless good cause for later notification can be shown.
- 4. The well shall be constructed by a driller currently licensed in the State of Idaho who must maintain a copy of the drilling permit at the drilling site.
- 5. Issuance of this drilling permit does not authorize trespass on the land of another party.
- 6. This permit does not constitute other local, county, state or federal approvals which may be required for construction of a well.

#### SPECIFIC CONDITIONS:

- Item 3 above is not required.
- 8. The well shall be constructed by a licensed driller.
- 9. A minimum surface seal of 18 feet shall be provided unless approval for less is granted.
- 10. The Department shall be notified when the wells are abandoned.
- 11. Abandonment shall be as specified in the November 17, 1987 letter or as approved by the Department.

Dated this 19th day of November, 1987.									
	Signed Oil ( Beil								
	Title SECTION MANAGER								
	GROUNDWATER PROTECTION								
Receipted by V 4 Fee	7- 1/s 70 = Date 11/ 8/87								
Receipt No15/0/ Construction start date									
Construction start extension to	o								
Extension approved by									

#### WELL CONSTRUCTION

#### preferred Option

Drilling method - air rotary - 4 inch steel

- natural sand and gravel Filter Pack

Annular Sealant - coarse grit sodium bentonite slurry

Annular Sealant (unsaturated zone) - bentonite pellets with

top 3 feet cement

Steel protector cap with locks

#### Alternative 1

Drilling Method - hollow stem auger

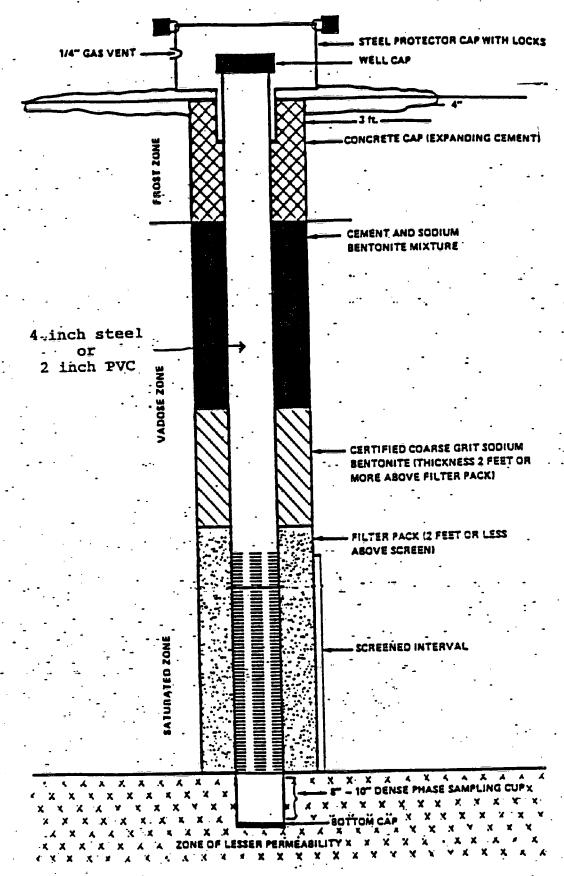
- 2 inch PVC Casing -- inert sand Filter Pack

Annular Sealant - coarse grit sodium bentonite slurry

Annular Sealant (unsaturated zone) - bentonite pellets with-

top 3 feet cement

Steel protector cap with locks



GENERAL MONITORING WELL - CROSS SECTION



December 2, 1987

John Carlson Department of Water Resources Statehouse Boise, ID 83720

Dear Mr. Carlson:

The purpose of this letter is to provide you with a follow-up of our telephone conversation of November 24, 1987. As we discussed, I have changed our numbering system for the monitoring wells that were proposed for permits on November 17, 1987.

Our original drilling plan called for seven (7) deep wells at the locations proposed in my letter of November 17, 1987. Upon further consideration it was determined that 3 deep wells (20 to 50 feet) and 5 shallow wells (15 to 17 feet) would be installed. Since the shallow wells were drilled first, our well numbering sequence was changed. The following table shows new SRM well numbers for the deep wells requiring permits:

Drilling Status	DWR Drilling Permit No.	old SRM Number	New SRM Number	Depth
in progress completed	63-87-2-080 63-87-2-081 63-87-2-082 63-87-2-083 63-87-2-084 63-87-2-085 63-87-2-086	SRM-WP-W-004 SRM-WP-W-005 SRM-WP-W-006 SRM-WP-W-007 SRM-WP-W-008 SRM-WP-W-009 SRM-WP-W-010	Not drilled SRM-WP-W-009 SRM-WP-W-011 not drilled not drilled not drilled SRM-WP-W-010 (same #)	

In addition to these three (3) deep wells (Permit Nos. 63-87-2-081, 63-87-2-082, 63-87-2-086), we have installed five (5) shallow wells in slightly different locations than originally planned for the other four deep wells (Permit Nos. 63-87-2-080, 63-87-2-083, 63-87-2-084, 63-87-2-085). The location and status of the five (5) shallow wells are as follows:

BH2/286.1

### APPENDIX L

WELL LOG REVIEW

## IDAHO DEPARTMENT OF WATER RESOURCES WELL LOG REVIEW

#### Introduction and Purpose

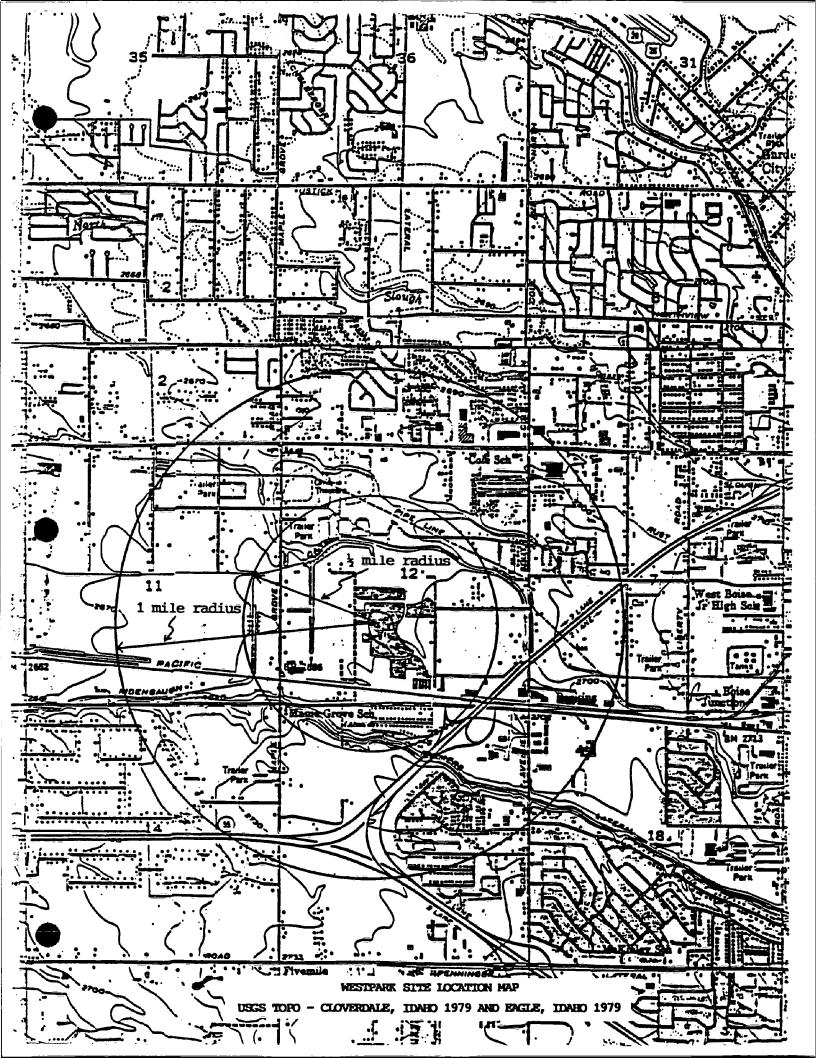
On December 14 and 15, 1987, well logs on file with the Idaho Department of Water Pesources, 2735 Airport Way, Boise, Idaho were reviewed to assess whether the shallow water table squifar at Westpark is being utilized as a source of public or private drinking water. Tetrachloroethene has been identified in the shallow aquifer (< 60 ft. deep) at Westpark in concentrations above the recommended EPA long-term drinking water standard for the chemical. Concern over the potential impact of the contaminated groundwater on drinking water supplies in the vicinity of Westpark has led to this well log review.

#### Study Methodology

The groundwater, as determined in the second environmental assessment report prepared by Special Resource Management, generally flows in the northwest direction. A study area of 1/2 mile radius surrounding the Westpark side (see following figure) was selected to ascertain the number of wells and population potentially impacted by the contaminated plume of groundwater. Those sections identified within the 1/2 mile radius include sections 11, 10 and 13. Although sections 1 and 2 were not within the 1 mile radius, they were included in the well log review as both are downgradient (northwest) from Westpark. Section 14 (within a 1 mile radius) was also included in the review as it encompasses a large population and number of wells. No well log search was done for sections 7 and 18 as both are upgradient from the flow of contaminated groundwater (although within a 1 mile radius).

well logs recorded on micro-fiche were cross-referenced with hackup paper copies to ensure that all well logs for the selected sections were identified.

Information obtained in the well log search included well owner and address, nature of work, proposed use, well depth and location, static water level and the date the well was drilled/completed. Many of the well logs on file were lacking specific information. A discrepancy was noted between the number of well logs recorded on micro-fiche and those on hard back-up copies, and it was felt that 20 to 40% of the wells in the area were probably not on file with the Department. The recorded well log information can be summarized as follows by Section:



Section	'rotal = of Wells Recorded	Total Recorded Wells < 60 ft.	Total Recorded Wells > 60 ft.
1	4 C	23	17
Ž	ĆĠ	22	44
11	28	1.1	17
Ī 2	26	15	11
13	32	U	32
14 (NE quad)	1 š	Ŏ	13
TOTAL	210	71	<del>139</del>

The following two figures show wells <a href="located">located</a> to the nearest quarter of a quarter section. There is a discrepancy between the total number of wells recorded in the well logs as summarized above, and the number that were located by quarter/quarter section and depicted in the following figures. This difference is due to the fact that all well logs were not filled out completely and the quarter section location was missing in some instances which made it impossible to locate those wells to the quarter/quarter section. Well log information for the following figures can be summarized as follows by Section:

<u>yantion</u>	Total = of Wells Located	Located wells < 60 ft.	Located Wells > 50 ft.
:	27	i 5	12
<u>.</u>	ē.	21	40
4.1	25	10	15
12	21	11	10
13	25	Ċ	25
14(NE quad)	18	_0	$\frac{18}{120}$
TOTAL	<u> </u>	<u>57</u>	$\overline{120}$

Only well logs for the ME quarter of section 14 were included since the mile radius encompassed only this quarter of the section. The total number of wells on record for the entire section was in excess of 300, however, only 18 were identified in the ME quarter section.

#### Results

In general, 25 wells were located within the 1/2 mile radius of the Westpark area. Of these, 11 are  $\le 60$  ft. and 14 are > 60 ft. in depth. It is reasonable to assume that the wells < 60 ft. are or were drawing water from the shallow aquifer.

Janle Gregory of the Boise Water Corporation (BWC) was questioned to determine if individuals on private wells had converted to public drinking water. Of the 25 wells within the 1/2 mile radius of the Westpark area 14 contained enough information on their well logs to be cross-referenced with BWC to determine if the wells had indeed converted to public water. Only 2 of the 14 wells were shown to have converted to public water. Since the remaining 11 did not show up on BWC records, Miss Gregory said that it would be reasonable to assume that they were still utilizing the private well for drinking water. Although there are other water companies in Boise, only the BWC services the area in question. Some of the remaining 11 private wells may be abandoned since many of the older farm houses in the area have been removed. (b) (6)

A random check of wells in sections 1.2 and 11 revealed that approximately 20% of the private wells had converted to public (8WC) supplied drinking water. This is the same percentage that was found to have converted in Section 12.

Representative well Drillers Reports for sections 1, 2, 11, 11. 13 and 14 are included in this Appendix. It can be seen from the Reports and the wells Drilled  $\leq 80$  ft. figure that sections 1, 2, 11 and 12 contain the only wells that are  $\leq 60$  feet. Bections 13 and 14 have no wells drilled  $\leq 60$  ft. This is likely due to the fact that these sections lie on a bench higher than sections 1, 2, 11 and 12 making it likely that wells drilled up to 120 ft. deep in these sections are drawing water from the same shallow aguifer in question.

#### Conclusions

The well log review identified 25 wells located in the 1/2 mile radius surrounding Westpark. Eleven of the 25 wells were 0.00 ft. Of the eleven wells only 1 (Bud Hegstrom, 5509 Lynwood F1.: is known to have converted to public drinking water. If the low conversion rate from private to public water supply is applied to the remaining 10 private wells (0.00 ft.), there would still be a minimum of eight wells 0.00 ft. Within the 0.00 mile radius that could be assumed to be drawing water from the same shallow aguifer.

within the 1 mile radius surrounding Westpark there are approximately 79 wells which have been located of which 23 are < 50 ft. in depth. Applying the 20% conversion estimate results in an estimated 18 wells utilizing the shallow aquifer within a 1 mile radius of the Westpark site. A number of these are of course upgradient of the known plume area and some are possibly abandoned (old farm houses).

The Department's well log file does not contain well logs for every well drilled in Idaho. To determine the exact number of potential water users drawing from the shallow aquifer within the 1/2 to 1 mile radius of the study area would require a visit to each location. The available data does suggest that there are at least 8 wells that may be utilizing this source within a 1/2 mile radius of Westpark.

Private well sampling would be required to determine if contaminated water is being utilized within the Westpark area since the downgradient extent of the plume has not been identified.

PIGE	T3N RIE SECTION	1				ļ	i	<b>f</b>
1	NAME	ADD455	NATURE OF WOLK	PLOPOSED USE	Total Depty	STATIC WATER	BUNDALINT LOCATION	DATE DULLED
by. X	Denue suyder	BOISE, ID.	Nèw WELL	IRLIGATION	29	8 NE NE	Pumping Level 18	6/30/86
*	WAYNE WYMER	6416 Butte St.	, M	j)	50	30 NWSE	36-50 sand 1 gravel	6/10/87
R	St. MARKS SCHOOL	7503 Northview	, и	p.	420	NESE	464-420 Sand sance	6/15/78
$\mathfrak{F}$	Flying Trailor Park	Ustick Rd			315	NE NE		2/70
· (X)	WAYNE DEWEY	3914 Buckingham PL. Rase	-		134	12- NE NE	134-136 Sauby Water	10/10/10
×	C.W. YARYAN	ASH PARK LAUT, BOUR II.	NEW WELL	DONESTIC	62	22 36 NI	5-289 race 32.42 grand 28-32 come cand 12-62 Blow QA)	10/28/77
3	BILL MEINERS	7717 Ustick	· 4		156	40 NW NE	51.60 Such 3 WATER	5/4/71
×	TED MORGAN	CHAISTING LN. Posts	d	4 0	42	15 se uw	30-40 subignive/ switch	וד צ וו
Ŕ	PED STEER INC	Fairmen		ıl .	108	40 SW 54	90-48 send grand } Water 48-50 having land } Water 50-96 - DILLY SAUS - LOWER 96-105 SAUDO GARREL - KARCO	25/72
, B	RED STEER INC.	FAIRVIEW	11	<b>1</b>	62	40 NW M	145-50 Senl z with	6/10/72
<del>,</del> <del>,</del>	John Telden	8809 HOL BROOK	44	ıt.	58	8 5W WW	7-37 5+6 - water 37-55-51-500 Clay South 55-5 clay Sante	1/26/69
; ×	ORTHUN HEREIM	7829 Suift La. Bois	e en well	Poneski	47	13 MWS	E 20-45 - Grand Clay & water	9/24/74
	St. Means School	7503 Northin	DEEPENED	irrigation	420	13 NE SE	400-420 send-water	7/12/78
hreoreig	NORMAL ADENS	Boise Id		TOMOSTIC	39	8	Claredale Subdiversa Lot 3	1963
. √,	HOWARD BURIUS	Bose Id		DONESTIC	39	Studius luter.	5 62 5 W S W 3.1 3 N IE	A62
2	ALDERT PLACE	WEST OF CITY, BIGE			53	10	Sw 5.1 3414	
• " ' '								

C. 2:

Bye	13N RIE SECTIONI						·	
2	NAME	Adpress	NATURE OF WORK	PROPOSED WE	MOTAL OFFITH	Stitic Water	QUADRAUT LOCATION	DUE DUMP
Х	L.E. MARTIN	MªZ Bosse Id.	b	SEAGATION	40′	16	E 1 N.W. 21 31 1E	MARCH 1955
×	R.L. HAMILL	Trailer how used fil.		Domestic	142	24	NE NW S.I. SNIE	6/18/58
×	fay Lewis	ASH LANE - WOUTH OF VETICE		įt įt	632	12	NE 4, NW 4 5.1 3N E	4/24/63
,_ '	MET HAZZL DANS	AT 1, Boise Id		41	432			5 24 63
×	K.S INVESTMENT CO.	GARDEN CITY FD.		45	4)	12	S.W. N.E. S.1 3N 1E	10/11/62
Х	DOW ADAMS	CHLISTINE LV.		u	40	8	NE HE SI INTE	9/11/61
	JOE MATIN	KUNA Id.		p	<b>ц</b> 3	8	N.E. N.E.	1156 ?
	ART SMITH	LINDA VISTA		p	44	6		10/17/63
	ALBERTON'S TAX.	Box 1359 BOISE		INDUSTRY	.60	10		1/31/59
	Jim Howell	517 No. 19th St.		Domestie	56	12		11/24/28
	LOUIE LARRIUAGA	501 Grove St.		11	94	7	I mik wat & No coursely	8/21/58
	JIM LEONARD	SWIFT LANE		<b>)</b>	80	20		2/16/58
	MARTIN OLSEN	SWIPT LANE		11	83	14		2/22/58
	J. 11. EDMULDSON	hampa Id.		n	50	17	Gmi s. on Ast pork OFF UST	4427/58
	Jin HOWELL	57 N. 19 1 St.		<b>a</b>	44	20	En s of whick on Ah	prt 4/25/58
×	FIDELITY HOLDING GO	17		14	653		SE SE S.1 3V 1E	7/12/54
	FAIRMONT JR HIG	H 13015E		IRRIGATION.	227			8/4/64

ا شناه م

							·	
Pige	TIN NE SECTION!		ij)					
3	NAME	ADDIUSS	NATURE OF WERK	PLOPOSED USE	Total DEPTIL	STATIC Water	QUADRAUT LOCATION	DATE MILLED
	FRIEMONT SCHOOL	Rumming Pool	New well.	surming pool	255	16		7/25/78
χ	ONEN WALTON	7123 Ustick		DUNESTIC	114	12	NE NE S.I 3N IE	4/27/63
	MIKE MATZEK	2204 Parkside, Buse	New MALL	. H	40	13	640 gravel 3 mater	12/2/26
( <b>x</b>	KING OF GLORY	FAIRVIEW AV. BIKE			323		SE SW. SI BNIE	8/20/65
×	WADE JOB	SWIFT LANE		Domestic	165	12	SE.SE.	10/5/62
—×	VERNOU EASON	Boise Fd		Irrigation	32	16' to starting	WESTLAND ACOS LOTE Bla SESE.	10 5/10/57
*	MERLE HILLER			DOADSTIC	43	9 to state		5/21/56
X	E.M. 1byT	Caple Id.		<i>]</i> )	47		SEZ SWSE S.I. 3NE	12/11/53
	TSU RIE SECTION	1			i i			
Prig. X	C.M WEBER	BOSE IN	NOW WELL	DOMESTIC	37	11 SWNE	4-39 gavel+ unter	4/16/80
×	John Card	2719 W. KIMBALL	] ] ]	μ.	35 2	8	SE SW, 15-32 anatyroud-onth 32-36 clay - 40 win 364 5+6 - water	6/26/79
capt. X	DON AUDÉRTON	2805 DALTON BOISE	n '	и	137	12-	(w NE)	4/28/87
۲۲۲۲	BOBE Water Corp	Bali Itai WELL	11	Manicipal	880		SE NE	10/26/72
×	GUY JAMES	7000 McGlochlin	u	Donista	392	10	SW NW (KILDGER SURBINGION)	5/24/84
	GARY HARDING	- 915 S. Curtis	11	./	110	6	LOT 19 BLOCK 1 HOME NOW	

a. a. a.

PAGE	T32 RIE setou 2			0 4				las au
4	NAME	Aponess !	Nature of mean	Proposed use	Total Papel	Slak Waley	QUADEAUT LOCATION	1016 perchily
×	Herb Brie	Muidian Pl	men well	Domestic	99	10	NE SE	145   78
,	EC JAVAUX	P. END OF Clempton Rd	H	į į	46	7	WW SW	3/2/70
Х	mius miuer	DALTON LANE	h	41	43	6	NE NE	17/7/1
•	MRS Rubeno	Granger off 5 mi.	l.	u	120	4 .	SW NW.	סדאוואר
	OB WELCH	Kimball at Vitain	<b>å</b> 1	μ	105	8	NW NE	12/13/19
-	MIKE WILMOT	1816 Hampton	4,	ц	90	15	SE SW	2/10/72
'	Jim Hall	overland	μ	47	110	36	NE NE VE	3/12/78
	Schoens Trish	5 mile + Fairin		μ,	177	M	3 W 5 W	3/3/73
	Ray Gray	9515 Sunflown W.	, u	ingatan	34	5 2	NE. SW.	9/15/80
1	SHINE HIPSLEY		11	Doneski	41	22	SW NW	2/17/87
MICROFICH	5					Ghalin .	CONTE	3/6
Vίχ	PETE FRUNDERTHALER	Kimbal St.	11		165	Starling 10	SW NE	3/68
<u>(x)</u>	GARY MOYNE	Kimbel St.	d		טון	1 5	NE NE	6/18
	GLEN SHEERS	N Maple Grove . Cong Las	n	domestic	100	r 3	NE NE	9 3/65
	ED BERUGS 4?	granza of 5 mile Rd	tı	N	126	115	SW NW ;	7/11/68
	Truis Duncas	3010 MNDA DISTA	n	<b>b</b>	92	510Tik 11	Proposed Trails Park	3/5/70
Œ	Schroder	Kinhal between cirkit	L 1	li .	76	8	NW VE)	11414
	port Smith (Builder			/1	44/	سخه ا		12/18/63

and the second s

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PAGE	13 N LIE 52		<del></del>					Pale,
5	Name.	ADVRESS 1	Naturation	(10 pood lie	Total Dyll	Statie Water	QUADRANT LECATION	i'ale Drilley
	Frank Miller	2510 N. 29 Bran	,	Domeste	75	1247	4mi East Shile	5/26/56
X	Bryce Peterson	4655 Shawwar La Porce	i now will	į.	116	"20"	Sw. SE	1/10/66
(X)	Burt Smith		b		101	4	SW SE	7/2/67
(x)	Burtsmik		н	n	80	6	JW S€	1/67
(X)	ED Bows (Bulde	)	<i>/</i> •		120	3	SN SE	7/27/67
(X)	Ruth ?	9751 Cony Lon	Д	11	130	3	SW NE	1968
×	(neue Copple	AZ lamble St.		<b>,</b> 11	41	19	NE NE	4/3/62
×	G.M. Madison	Jamball St. RTZ		11	50	5	NENE	8/25/61
ξX	CARL TYGER	RD Z Boin Pd		./	161	7	NE NE	3/2/59
(X)	John Waits	R#1 Boni Pd		H	146	ground level	Lot 1 of Homeaces subtil	9/6/56
:	Ed Benss		her well		130	10		7/66
_0	// II		hen well		3 ج	20	NE NE	3/67
×	Roy Eshelman	RD 2 Doise		Womestie	41	6	NESW)	8/10/62
×	Larry Sparks	R#Z Borse		11	38-	12	E & SW)	4/20/59
Ò	ALFRED T.SALL	9205 grange Way	New well	()	80	10	SE NW	5/24/67
×	John Readon	RO 2 Parse		11	59	4	an NW)	0/4/64
( <u>w</u> )	Ralph Shosemal	er Franklickel		/1	170	31	NW junta,	72/64
						1		

	13NPIE 52					1		. Pal
1496	Name	adles	Nature June	Proposed Use	Fold Dephil	Slake Well	QUADRANT LOCATION	Pal   Dul
(3)	Uncle Pete	Bair Pd	I.	Domestic	115	8	SE NW)	1/2/
×	Lewis Howard	1318 Longmont St	  -  -	μ	40	7	JE 5E	10/11
×	Richard Halsteal	24.42		Л	41	10	SINE SE	14r
×	AJ (OO)	Rt 2 Habstead Or.	ı	Į1	38	4'10"	SINE SE	10/5
×	Bert Luse	HZ.		p	40	8 .	SE SE	9/8/
×	Carl Tyger	Halstead St.		11	40	10	SE SE	3/2
<b>(8</b> )	IKE WRIGHT	Brie	:	<i>j</i> 1	270		ou sw	
B	But Smith			"	70	4	JE SE	4/6
×	Bent Smith			11	44	8	SE SE	11/
( <b>B</b> )	Burt Smith		new well	и	77	6	SW SE	4/16
(8)	ıı.		New Well	\$#	115	6	SW SE	3/11
_( <del>X</del> )	וו		17	μ	88	6	SU SE	3/7/
B	ED BEW		<i>)</i> •	1	115	6	SW SE;	4/2/
( <u>X</u> )	ED BEWS			• • • • • • • • • • • • • • • • • • • •	80	4 .	SW SE	11/18
(x)	)1 Ji		11	11	118	6	SW SES	3/26
( <u>&amp;</u> )	μ ()		,,,	"	109	4	SW SE	7/3/
(X)	JIM SANW	Sunflower In	/ \	ot W	.77	5	SE VE	12/9

And the second of the second o

18-1	T3W RIE 52	Odhus	Notice of work	Proposed Use	Total Depth	Static	QUADEANT LOCATION	inite Drilled
X	Albert Blaser	3710 Tamrock St.	New	Donesti	45	13	SESW	1/9/76
. ×	Ada Electric	805 Park Blod.	ц	r	41	12	SW SW	2/12/76
	l .	De. Por 7684 Brise	<b>h</b>	Industrial	232	ı	sw SW	5/30/73
×	Bust Smith own	ase		Donatie	42	8	SE SE)	3/14/64
<b>(X)</b>	1	ļ	للعلا	11	100	68	SE NW,	0/1/65
( <del>%</del> )	Rich Kish	2728 Dalta La.	u	•	184	10	(NE NE)	10/25/76
<u>®</u>	BIJI Dokken	2620 N. Mitchell	4	ji.	158	6.0	SW NE	3/25
(3)	James ?	·	,	Л	122	20	SW Ne	2/12/77
(*)	George ?	Halstead	11	n	240	10	SW SE	1/15/17
•							·	
					'			
						! ! !!		
						<u> </u>		

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T3N RIE SI	2				cht.		Dr.A.
hous man	AIDECSS	Nature of work	Permet the	Tad Capt	Static water	DUADEANT LOCATION	Isuled
pepulopy Richard Be	otley Impul Way	New Well	Domostec	55	15	6.55 Samle Grand-with	4/485
Copy & Roy ander		n "	ingthi	43	10	NW SE.	5/31/79
X Sten Known	ii	ji .	Domistic	362	14	NW NW	11/6/13
Bishoff	(/入(く)	ı		55	4		
(X) Helmut You	i .	Replacement	μ	82	9	SW SW	5/20/79
X Robert R	duger Imput Way	Now Well	<i>j</i> 1	55	6	SE NE:	2/15/70
i .	DENINAL 903 Impiril May		"	48	<i>3</i> 2	NE SE 45-45 WITE	וראח/יו
( Tad Vino		· 1	Menicipal	124	10	su su bet clizic	11 6/71 BUC WATE
	Braser Imperial Acres Subdi.	,	Omester	36 2	6	SE NE	2/19/64
Va Washua Tr	alor Co. Maple Grove Frankli		Fire Protection	283	Flow	sw sw	2/27/64
Ø Tom B	rown 6001 Fairview	New well	donestic	8-9	3	SW S€	6/9/66
<b>j</b> i	angeloh 2700 Pruce Or	1	U	50	10	i e	9/3/69
Morehouse	. Elmor Rell (swith) Prece	9	11	42	6		9/27/63
	"Le Pape Buller" 715 Brook		`	<i>t</i> 3	6		9/14/63
Bert Le			/1	40	9	Imi wed foole solut	1/13/56
SHoemake	Trucking Bossi Pol	,	Office	110	6	East for Makelyone	3/1463
× Elma.	Ball	New Usel	domestic	41	6	SE NET	4/10/66

T.1.1 TBN FIESIZ Shi Progred QUADRAUT LOCATION Pog DIFT Willia alles Noting work Hoe NAME NW SE 1968 ash Park In wes Draper 47 Dom-6 New 5/17/67 Nie Lopey 7961 Fairver NE NE 156 10/21/62 NE NE 1905 Westown Blod 68 Lee Clark 7/3//63 CONVENTED TO BUIL & \* Bud Heystrom 5507 Lywwod Pl. SW NE: 11 41 5 SE NE 1/27/66 x Ed Cook 4367 Linda Vista 48 New SE SW Donestie 6/20/60 Mayne Pel, Hy Co. Orchard due 172 5 6/21/79 (3) Marrien Jenson 410 N Maple Jour SW NW 4 262 Lus 12/21/76 & Silver Sege Girl Scortlange 1413 Etweridge Lu. 79 15 SW NE , 1 NW NW. (x) Howey Stone 147 42 T3N RIE Sell 11/7/77 Kayle Hollo SE NES Mell 180 Donestic ( ) Circle K Food Store NO NWI 2/12/13 commenced 140 11 mu irization NE SW Bose 2/6/78 Starting lancape 40 11 10/17/18 Fairian Ove Donestin 200 NW NW; Robert Hophins 11/28/18 Box 7921 Bree SE SE Jack Rencher Deepenel 120 X BOB ASBURY 5W SE , 620 Kimbell 28 4/3/72 11 15 New 8 5/25/72 NW NW) HIE Construction Box 156 Boke (1) 42

•	T3N RIE Zell				0	Stelic		1
1910		aldres 1	Notice of work	Respond Vise	depth	with	QUADRAUT LOCATION	dulled
8	Leonard Johnson	9975 FairIEW	New	and within	125	o	NE NW	5/24/72
. (8)	CHARLES LINES	1501 Hervey St.	<b>K</b>	Donatic	62	12	'SW SW	8/25/69
×	Dean Patterson	·	N	۸	48	4	NW NW	4/19/72
	Ro. Steele	1220 M Mikelell Boil	a Replacement	1	33	7	NW NE	2/17/2
	Doug Gaskell	9161 Delton Place	New	ų.	72	8	SW NE	16/21/12 CONVERTER
	Bill Crist	1180 Hampton PS	и	11	28	11	NESW	4/26/53
	HAUR Houst	922 Hampter Rd	u	lı .	75	7	NW SW	4/13/82
-1	Dick John			14	54	6	NW SW	8/4/68
10	POB Vincent	Bois ld	W.eW	n	OK	1/2	NN NW	9/9/61
ĺ	Rodgers Trader Ut.	· ·	in h	u	185	2	ve NW	8/29/69
	L.E. Holderness	j ·		Pomestie / Subdivis	218	5	Lot 1 Block 1 Strings	4/65
	Floyd Eshelman	4 Maridian Il		Domesti	382	8	VEM NW IM No good	A. 1 1/2/56
· (3)	LE Iblderners	R1 Z		11	97	5	NW NE;	7/11/63
×	G.E. Hurrie	1011 Kinhall 184	Replacement	11	40	12	NE)	7/2/67
<sup>1</sup> X	LC Smith	3 me House behind S	lou Spur	11	35	4	WENW	11/8/63
	James Howell	517 N 19th	·zi	,,	67	2	NW SUS	10/5/63
	Bonson John Benedic	Overland Pd. 861 No. Michel St.	New	11	128	32	E' NW	5/4/67

	TON ELE SECTI		14 ./5. 0	0	110	cl 1.		Pate
PAGE	Name	( Uddres 1	Mating Work	Proposed	Tyle	Slake Water	QUADRANT LOCATION	Prolle
	PHillip Benedict	1	how	Donustie	198	2	(EZ NW	6/16/77
	Sterlis, lanscape	<b>i</b>	, N	4)	166	1'8"	NE NE	1/1/15
x	Bruce Sackman	1048 N. Dalton	u	Suigntion	29	10	NE NE Sunda Gravel water	7/2/86
•	tal. 05 Sec 13							
Paper.	JIM PRE SEC 13		Deepened	Faregalian	///	12'5"	A	Whele
		! i		1 - 1		ł	NE NE)	4/28/86
(+ F')	M Minton-Rocky MW   Development Co	One lap be lester Prise	rew	Domestic	732	46	SW SE	12/4/17
	1	8119 Kingslington	þ	μ	99	22	NW NE.	ड/योग्ड
	Charles Transtrum	Soreuson LN	ч		85	25	SW SE	11/17/77
C148	Dewayne Cope		Deeperd	. (	145	1	NW SE)	10/1485
	Bill Cates	4200 Hillerest	hien	η	122	So	SW SE	1/22/73
	Hendrick	N. Orchard	•	,	106	51		10/8/70
(x	Burton Smith	Boise	<b>3</b> 4	Industrial	71	32_	SW SET	8/30/12
P	Don Wilson	7515 Camus	ll .	Domestic	170	50	IN NE	5/25/71 CUIVERS
B	MAX YELLINGTON	350 S. Maple grove	B N	,	104	37	SE NW.	12/7/71
(20.00	OGUS Blaser	5821 Randolph Dr.	μ	μ	129	60	SW NW	6/1/82
	K) Inkrmautan 9as	Brei		Dom, Fire, Irrig.	875	41	SE NE,	10/14/63
- <b>v</b> &	PANCHERC MORTAN	5000 overhal		Dom, Truis	160	50	SW SE)	E/7/69

n.

:-<sub>94</sub> :,

<b>17</b> 12	BN RE Sec13 Name	aldres	Nation fund	hidoseq	but Depth	Hobe whin	QUADRANT LOCATION	Pry
<b>O</b>	yerrington	Maple Grove	abandoned		91	43	NN NW.	13/67
	Auzuilie Echavariia	7524 (anso St.	New	Donistii	205	40		11/15/6
E	American Realty ( b.	923 Main St.	Drepend	Commercial	96	6	NN NE	5/24/6
-	Marvin Wilder	Prine	•	Womstie	110	51		1957
	Robb. Jones	RD #3		B	65	38	Randel Acres Sub 12 Block 3 Lot 10	12/17/
	Pendal Realty Co	923 Main St		Housing propert	124	5	In S & must Colede	9/14/5
<u> </u>	lı.	И		Donestic	3 <i>60</i>	48	NW SE	6/23/
®	Alvin Sigety	5124 grown		14	265	50	SE SE.	2/23/
	Robert Breckman	_		l l	64	31	SE NE	1376
	GORDN Grigg			11	76	21	SE NE	10/24
	l	923 Main St		11	71	3 5	Pandell Aces Set 12 Block 3 Lat 12	5/10/
	Joe Baler	<b>1</b> 1		<b>,</b> p	97	40		<del> </del> -
	Hessing Chryslor		New	Don, Municipal	107	11	NE NE	1/21/ 9/77
	Everet Herriss		ŧı	Quigation	86	23	SE SW?	8/22/
	Pleasent Valley Buil	1.		Donestie	95	25	5wsw	ו/ד <i>ו</i> ן
	11 11			11	68	30	SW SW	5/1/75
	Crawford Const.	i	1	1,	130	55	GE SET	16/4/
	Archer Stevenson		1	н	74	17	SWNG	4/12/

and the second s

	i Lv	1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1		a 🥳 - 1				128 1.	
	413	13N BIE Sel3	addies	Nation funct	Preprod Vac	Told Dipch	stele a	QUADRANT LOCATION	liole Novilled
		Fa. Sthuey	Fairbrew due		Domestie	110		SE SE,	11/5/53
	libys.	13 N ETE SEC 14	BISO W Victory	New	Nunecipal	675	37	VE NE	9/21/81
	117	KRIS GULLEY	Pocsi	n	Domoba	79	30 39	SE NE	8/12/86
		WW Hedrick	9350 Binapfl 1154 N. Orchard	μ.	D	154	32	SU NE	2/25/74
		Rousey	Franklin Rd m: 531 While Cloud B	11 2 g New	Donesta	MZ	44	NW NE SU NE	7/14/84
		ww Hedrick	1154 W. Cichard	.1	11	118	35	SW NE	8/30/73
	į	Jim Maffett	1841 Browlmon	p den la	μ 	94 81	30	SW NE NENE	1/26/73
			9615 Franklin	41	''	93	50	NW NE	4/26/71
į		Youngethammer Al smart	402 Billemost, Bo	4	,	104	35	NE NE	3/73 5/17/77
		Curtis PerK-Cou	A	"	,	106	56	NW NE	4/23/85
		Mark Kirkpatrick Jim Montgenery	Box 4051 Bris	4	Donestie	150	33	SW NE	11/1/68
		PCT CYOSS	Franklin Rd Movelan		h n	20Z 1Z0	20 37	SE NE	6/10/78
		JAMES ROARL	2900 TAMARACK		/1.	178	42	SW NE	3/29/73

### Department of Water Resources

# WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandoninent of the well.

1. WELL OWNER	7. W	ATER L	EVEL				
Name C. V. Yaryan	Static water level 22 feet below land surface Flowing? (1) Yes 150 No G.P.M. flow						
Address Ash Park Lane, Boise, Idaho	Te	mperatu	Jř @	F. Quality			
	Ar Cc	tesian c introlled	iosed-in I by	pressurep.s.i.  Valve C Cap	() Plug		
Owner's Permit No.							-
2. NATURE OF WORK	8, WELL TEST DATA  Digina Disiler & Other compressor						
💆 New well 🔲 Deepened 🖾 Replacement		Pump Bailer S Other Compressor  Discharge G.P.M. Draw Down Hours Fun					<del>-</del>
Abéndoned (describe method of abandoning)		20		2'	3		
							<del>-</del>
3. PROPUSED USE				<u> </u>	<u> </u>		-
□ Domestic □ trrigation □ Test □ Other (specify type)	9. L	ITHOL	ogic L	0G			
— — — — — — — — — — — — — — — — — — —	Hole	Dep		Material		Yes N	
Municipal   Industrial   Stock   Waste Inspection	Diam.	From	T•	Top soil			<b>x</b>
4. METHOD DRILLED		5 28	<u> 28</u> 32	Gravel Coarse sand		X X	
で Cable 日 Rotory 日 Dug 日 Other		32	42	Gravel		· <del>×</del>	
5. WELL CONSTRUCTION	├──	42 Bott	62 on co	Brown clay		x	
Diameter of hole 6 inches Total depth 62 feet						_	
Casing schedule:							_
Thickness Dismeter From To .250 inches 5 inches + 1 feet 59 feet	-						_
inches	1		-				
inchesinchesinches	1					-	<del> </del>
Was sating drive shee used? 2 Yes Ne	-	<del> </del>					
Was a packer of real used?   Yes S No						_	上
How perforated?   Factory   Knife   Torch						-	<del> -</del> ;
Size of perforation inches by inches Number From Te		+				二	
perforations feet	1					匚	二
perforations feet feet	·					├-	+-1
Well screen installed?	-	1	+			F	-
Manufacturer's name Model No	: -	-	<u> </u>			二	
Diameter Sigt size Set from feet to feet	: 🗀	1				+-	+-
Diameter Stot size Set from feet to fee	`=					Ţ	-
Gravel packed?	. —	+			·	二	#
28	. —	1	1			上	<u> </u>
Puddling clay Well cutting	r 🗀	_				-	+-
Sealing procedure used  Sturry pit  Temperary surface citation  SXX Overbore to seal day	:}	<u></u>	ــــــــــــــــــــــــــــــــــــــ				
		<b>.</b>		10/25/77finishe	10/ž8/77		
a LOCATION OF WELL	<u> </u>	Work s	terted _	10/23/11			
Sketch map location must agree with written location.	١,,	. DANLLİ	ERS CEI	RTIFICATION			
Subdivision Name		Firm I	torne L.	R.Hunsperger Well	Drlg. From	Na 1	<u>92</u>
Separation realization		Baltras	. 600	55 Oreana Dr., Bois	0 000 10/	<u>′31/</u>	22
Lot No Block No	1			m Official)	201/-		
		Signed	<b>47</b> (F#)	and The			
CountyAda	-		K	perotor)			
SE 14 NE 14 Sec. 1 T. 3N N/S, R 1E E/	<u>w]</u>			<u> </u>			
USE ADDITIONAL SHEETS IF NECESSARY							

## WELL DRILLER'S REPORT

State law requires that this report be filled with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER	7.	WATE	RLEV	EL				
Nome Doa Undertage		مادددی	water t	evel	12 feet below land	d surface.		
Name		Flowin	ng? C	J Ye	Mo G.P.M. flow	<i>-</i>		_
Address 2805 Rollon Coise					pressure p.s.l.			i
Owner's Permit No.		Temperatura OF. Quality Describe oriesion or temperature zones below.						_
2. NATURE OF WORK	8.	8. WELL TEST DATA						
New well Deepened Different	D Pump D Bailer B Air D Other						_	
Ahandoned (describe shandonment procedures such as	Discharge G.P.M. Furning Level Hours Pr					nped		
materials, plug dépths, etc. in lithologic log)	25 37 4					_		
3. PROPOSED USE								=
Domestic 🗓 Irrigation 🗇 Test 🗆 Municipal	9.	LITH	orogi	C LC	DG .		_	
📋 Industrial 📋 Stock 🔲 Waste Disposal or Injection		De			Material		Wat	er No
C) Other (specify type)	Diam.	From	10	-	Brow Proof	<del></del>	Yes	7
4. METHOD DRILLED	9.1	ĬĬ	6	⊢₽.	Wa cloy			V
D Rotary & Air   Hydraulic   Reverse rotary	2"	8	(8	_8	brown grovel + sand		7	V.
Cable Dug Other	- <u>7</u> n-	LETT	24	<b>–</b> 6	10WY C 10 7	<u> </u>	- <del></del> -	7
	6	67	135	l Ba	own + Nhill corse	2804	Z.	ÿ
5. WELL CONSTRUCTION	<b>6</b>	73.	86	- 8	rown cloy		7	1
Casing schedule: Steel Concrete Other PVC Thickness Diameter From 79 <sup>To</sup>	25	88	all	-7	-OWAZOY			Z
Thickness Diameter From 77 Inch	\ <u></u>	gy.	75	<u> </u>	LOWY CIDA CLOCK		Y	17
Thickness Diameter From 1970   1981		175	175		Story Clay	<del></del>		ママ
Inches Inches leet feet	1,2	ιżċ	134	[Ē	luccloy crock		V	
Inches   juches   leet   feet	. <b>b</b>	124	11/0	_£	rown clay crock rown clay luctory luctory luctory		_	<u>×</u>
Was casing drive shoe used? ☐ Yes ☐ Nō Was a packer or seal used? ☐ Yes ☑ No	ļ <del></del>						_	=
Perforated? VI Yes I No							_	_
How perforated?   Factory   Knife   Torch/Sau							_	-
Size of perioration inches by inches	<b> </b> —			្រា				_
					(Ranch li	1	_	_
perforations leet feet feet				Ш	<u> </u>	<u> </u>	-	-
perforations feet feet Well screen installed?  Yes No			二		<u> </u>		_	
Manufacturer's nameModel No.				_	<del></del>			
Manufacturer's name				-D	epartment of Water Resou	ırces		
Diameter Slot size Set from feet to feet Gravel packed? Yes No Size of gravel				_	<u>—mi:(();)()</u>	相铝化	-	
			<del> </del>			-4-1		
Surface seal depth St. Material used in seal: Coment grout			_			رب		<b> </b> _
☐ Bentonite		<del> </del>	<del> </del> -				_	_
(4 Overbore to seal depth	_				Department of Water	Peronices		_
Method of joining casing:   Threaded  Welded  Solvent Weld					Western Regiona	I Olike		-
☐ Cemented between strata	-	Ļ	1		<del></del>		·····	
Describe access port	10.	We	ork star	ted _	4/24/57 finished	4/28/	<u> 187</u>	
	<del> </del>							
8. LOCATION OF WELL	11.				TIFICATION			
Sketch man location must agree with written location.	l	I/We	cortify tied wit	tha h at	t all minimum well constr the time the rig was remov	ieq. Nčtiču žfikom	OI W	
N Subdivision Name	l				S WELLDRILLING		17	
		Firm	Name	/10	N Rlacker L C.	ا به ۱۲m No. <u>ک</u>	<u> </u>	_
w  E		Addr	الا. الملا. •••	ckie	N. Black cat food	ato <u>6-16</u>	-8	2
Lot No Block No	1				Ollegal Track	benen.		
المناسبة المناسبة	Į	Signe	א) עס ט	ırm (		-		_
County ada				# •~^)	Official Frank S.  nd  retori Frank S.	Rune		_
1/6) v 1/F u s D T 7 N/K R.   EM.				,-pe	TA TANK TO	: <del>-</del> :		_

#### WELL DRILLER'S REPOR

State law requires that this report be filed with the Director, Department of Water Administration within 30 days after the completion or abandonment of the well.

1. WELL OWNER	7. WATER LEVEL									
Name Boise Water Corp. (Bali Hai Well)	Static	vatër lëvel	feet below land su	riace						
	Flowin	97 🗀 Ye	es 🔲 No G.P.M. flow							
Address Brise, Idahe	I empe Artesia	ratur <b>e</b> n closed-ir	F. Qualityp.s.l.	<del></del>		<del></del>				
Owner's Permit No.	Contro	iled by	☐ Valve ☐ Cap	□ Plug						
2. NATURE OF WORK	8, WELL TEST DATA									
	· _									
☐ New well ☐ Despened ☐ Replacement	Distant	o G.F.M.	Bailer Other	Hours Pu	mpt	<del></del>				
☐ Abandoned (describe method of abandoning)		8_		10						
			1							
	, <del></del>									
1. PROPOSED USE										
□ Domestic □ Irrigation □ Test	9, LITHO		.0G		1	Vator				
☐ Municipal ☐ Industrial ☐ Stock	mana	opth 1 To	Meterial			No.				
<del></del>		4_	Tep Sell		1	丰				
4. MÉTHOD DÁILLED Reverse			Herdonn Soil		Н	+				
☐ Cable   ☐ Rotory  ☐ Dug   ☐ Other		9	Gravel & Sand			1				
		26_	Gravel, clay & som	SETAND .	Ρŀ	4				
5. WELL CONSTRUCTION	30		Lrg Gravel & Crs S Lrg Gravel & Crs S		1	+				
Dismeter of hale 24 <sup>st</sup> Inches Total depth 880 feet			Gravel & Fine Sand		$\prod$	工				
Casing schedule: (2) Steel		40			₩.	╀				
Thickness Diameter Front To	40		Ten Clay Sandy Tex Fine Brown Sand	turea	╟	+				
	4		Clay Sandy Texture	1	1	工				
373 inches 12" inches 373 feet 493 feet 375 inches 12" inches 497 feet 504 feet	4:		Brown Sand		╁┝	┰				
375 inches 12" inches 497 feet 105 feet 368 feet	10	3 103 1 110	Tan Sandy Clay	······	╁	┥一				
·	iii	120	Tan Sandy Clay			工				
Was a packer or seal used? ☐ Yes ☐ No Perforated? ☐ Yes ☐ No	120		Inn Clay with Iron	Staln	H					
Perforated?	160		Blue Gray Clay Blue Gray Sendy Cl		H	┰				
Size of perforation inches by Inches	160		Blue Gray Clay		П	工				
Number From Te	210	221	Gray Sand Very ama Blue gray sand tra	ll eravol	#	┿				
perforations feet feet		2779	Nine gray sand tra	FFS FC VC	Ц	工				
perforations feet feet	23	2/10	Alue Green Clay		11	+-				
Well screen installed? ☑ Yes ☐ No	24		Green Clay Clay		H	.+				
Manufacturer's name	25		Fine Gray Sand							
Type Stainless Steel Model No	25		Blue Clay		╀╌	<b>\</b>				
Diameter 12 Slot size 60 Set from 367 feet to 356 feet Diameter 12 Slot size 60 Set from 359 feet to 373 feet			Fine Brewn Sand		十	+-				
	25	7 257	Fine Brown Sand		L	Д				
Grøvel packed? 🖸 Yes 🗆 No. Size of grøvel 💥 💯 🖢 Placed from	26		Tan Clay & Fine Br	ewn Sand	Н	+-				
Placed Holling	27		Fine Gray Sand		17					
Surface seal?  Yes  No To what depth 120 feet	27	3 275			+	Н-				
Material used in seal DE Cornent grout D Puddling clay	27				╫					
& LOCATION OF WELL	28		Blue Gray Sand		7					
Sketch mep location must agree with written location.	10. 28			98 0-5 1	n.,.					
, N	Work	tarted	Li Aug 1972 finished	23, 051 1	,,,,	<u> </u>				
w			RTIFICATION illed under my supervision s	nd this report	is					
	1		af my knowledge.	anger en mer om en en en en	-					
			•							
•	Pet	or Firm's	Pellling Company	71 Nurr						
County ads	P.0	, Pox 5	61 - Heridian, Idah	n 83642						
	Addres	•								
SE 12 21C 14 Soc. 2 T. 3 N/S, R. / BM	Signed	87		Dete	_	_				

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Administration within 30 days after the completion or abandonment of the well.

WELL OWNER	7. WATER LEVEL							
Name	Static water level feet below land surface							
Address	Flowing?	<del></del>						
	Artesian closed in pressurep.s.i.	<del></del>						
Owner's Permit No.	Controlled by   Valve   Cap   Plug							
2. NATURE OF WORK	B. WELL TEST DATA							
☐ New well _ ☐ Deepened ☐ Replacement	☐ Pump ☐ Bailer ☐ Öther							
Abandoned (describe method of abandoning)	Discharge G.P.M. Draw Down (; ) Hours Pur	mped						
	3/8 0 2/0 10							
3. PROPOSED USE								
□ Domestic □ Irrigation □ Test	9. LITHOLOGIC LOG							
☐ Municipal ☐ Industrial ☐ Stock	Hole Depth Meterial	Yes N						
☐ Municipal ☐ Industrial ☐ Stock	289 290 Gray Sand							
4. METHOD DRILLED	290 295 Blue Clay-dry	╂╂						
□ Ĉable □ Rotary □ Dug □ Other	295 304 Fine Gray Sand X 304 327 Slue Clay							
	337 3374 Blue Gray Sand	<del>     </del> -						
5. WELL CONSTRUCTION	3374 347 Riug Clay 347 355 Blue Gray-Sand	<del>                                     </del>						
Diameter of hole inches Total depthfeet	355 359 Blue Clay							
Casing schedule: Steel Concrete Thickness Diameter From Te	359 371 Gray Sand	<del> }- -</del>						
375 Inches 12" Inches X 576 feet 587 feet	371 373 Gray sand seme gravel 373 414 Blue Clay							
	414 415 Gray Sand							
inches inches feet feet inches inches feet feet	415 418 Gray Clay	<del>  - -</del>						
inches feetfeet	418   620   Fine Gray Sand	<del>                                     </del>						
Was a packer or seal used? ☐ Yes ☐ No	493 496 Gray Sand Some Wend							
Was a packer or neal used?	496 499 Soft Sandy Blue Clay 499 501 Gray Sand	╂┼┼						
How perforated? ☐ Factory ☐ Knife ☐ Torch	501 504 Blue Gray Clay							
Size of perforation inches by inches Number From Te	504 0 Fine Gray Sand							
perforations feet feet	530' 534 Gray Sand streaks of clay							
perforations feet feet	544 531 Clay							
perforations feet feet		╂┼┼╸						
Well screen installed? ☐ Yes ☐ No	568 575 Fine Gray Sand							
Manufacturer's name Model No	575 576 Shaley Clay							
Diameter 12Slot size 60 Set from 493 feet to 497 feet	598 577 Seft Clay 577 582 Shaley Clay	<del>                                     </del>						
Diameter 12 Slot size 60 Set from 504 feet to 544 feet	582 586 Sandy Clay							
Gravel packed?   Yes   No Size of gravel	586 587 Sand	<del>  /   -</del>						
Placed fromfeet tofeet	587 588 Sandy Clay	吐						
Surface seal?  Yes  No To what depthfeet	592 600 CLAY	1-1-1-						
Material used in seel   Coment grout   Puddling clay	600 601 Fine Sand	<del>                                     </del>						
6. LOCATION OF WELL	610 630 Sandy Textured Clay	Ш						
		<i>i</i> .						
Sketch men location must agree with written location.	10. Work startedfinished							
	11. DRILLER'S CERTIFICATION							
<b>"</b>	This well was drilled under my supervision and this report i true to the best of my knowledge.	12						
	tide to the best of my knowledge.							
come ada	Driller's or Firm's Name Numb	<del></del>						
SE % 21C % Sec. 2 T. 3 N/S, R. / BN/	Address							
<u> </u>	Signed By Date							

### WELL DRILLER'S REPC

State law requires that this report be filed with the Director, Department of Water Administration within 30 'ays after the completion or abandonment of the well.

	7 .	VATER	LEVEL					
WELL OWNER	1							
Name	.  :	tatic wa	ter level	feet below land s	urlace.			
	'	lowing/	() Y	No G.P.M. flov	v			••
Aridress	·  ]	emperal	iure <u> </u>	pressurep.s.i.			-	-
Owner's Permit No.				Valve ☐ Cap				
2. NATURE OF WORK		VELL TI			<u> </u>		-	
□ New well □ Deepened □ Replacement	(	) Pump		☐ Bailer ☐ Othe	r			
•		)ischarge	G.P.M.		Hours F	้นเกา	p ed	_
<ul> <li>Abandoned (describe method of abandoning)</li> </ul>		3768 210 10					_	
					-		_	_
	٦			<u> </u>	J	-	-	
3. PROPOSED USE		LITHOL	מפור י	og				
☐ Domestic ☐ Irrigation ☐ Test	-	-	pth L	<del></del>		_	w.	101
☐ Municipal ☐ Industrial ☐ Stock	Hole Diam.		To	Material		-	7 85	_
	+		64L	Blue Sandy Clay			Ξ	_
4. METHOD DRILLED		641	774	Shaley Dry Green		-	$\vdash$	Ļ
		174	175	Gray White Silica		-}-	$\vdash$	
□ Cable □ Rotory □ Đug □ Other	<u> </u>	775		Shaley Dry Green	Clay	-}-	<del> </del>	├
E WELL CONSTRUCTION	}	850	854	Clay Sand & Green Clay	Lavors	- -	<del> </del>	一
5. WELL CONSTRUCTION	-	854 858		Green Clay		_	<del>i</del>	t
Diameter of hole inches Total depthfee		850		Silty Clay		_ -		
Casing schedule:	<b>├</b> ─	870		Clay				
Thickness Diameter From To	$\vdash$	1						
inches inches + feet fee	٠					_ _		_
inches feet fee	t [					┵	<del>-</del>	=
inches inches leet lee	t	ļ.,	<b> </b>			┵╽	<u> </u>	
inches feet feet	t	ļ	<u> </u>			-	<u> </u>	<del> </del> –
inches inches feet fee	` <b> </b>	ļ	<u> </u>				$\vdash$	-
Was a packer or seal used? ☐ Yes ☐ No	-	<del> </del>	<b> </b>			-  -	<del> </del>	-
Perforated?	-	<del> </del>	├─	<del></del>		-	1	-
How perforated?	-	+-				- -	Ť	1
Size of perforation inches by inches		+	<del> </del>			╛	Ī	
Number From To		1					Ĺ	Ĺ
perforations feet fee	L.	1					<del>! -</del>	<b>{</b> —
perforations feet fee						+	누	┝
perforations feet fee	٠,	<del> </del>	<u> </u>				╄	┝
m n or traditions D Van D No.		<del> </del>	<b> </b>			┿	╁-	-
Well screen installed? Yes No Manufacturer's name			<del> </del>	<del></del>		╁	╁	+
Type Model No.		+		<del> </del>		<del> -</del>	1	1
Diametel 2 Stortize 60 Set from 300 leet to 370 let	, <del>                                    </del>	-	1-					
Diameter 12 Slot size 60 Set from 587 feet to 592 fee	n	1-					I	L
						J	$\mathcal{I}$	ــــا
Gravel packed?	-[					<b></b>  -	4	╄-
Placed fromfeet tofeet	t	-	<u> </u>				Ļ	-
Surface seal?   Yes     No To what depth fer		ļ	<del> </del>	<del></del>		+	+	╁╾
Surface seal?	`—	-	<del> </del>			+	+	†
merandi dan mi soni —	<b></b> -	<del>                                     </del>	-	<del> </del>	<u>-</u>	- -	t	T
6. LOCATION OF WELL	$\vdash$	ــــــــــــــــــــــــــــــــــــــ	<u> </u>				T	
Sketch map location must agree with written location.	10.			•				
Jaketen men location index agree with written location.		Work sti	rted _	finishe	d			_
						_	_	
			-016	PATIFICATION				
w	111.			RTIFICATION	and this reno	st ic		
"   T	1.			illed under my supervision of my knowledge.	eum mus rébo		•	
<b>├</b>		rina io	<b>. 1873</b>	OI HIT KINDWIELYO.				
<u> </u>	1 '	ŀ		<b>;</b> ·				
• !	1	Orillar's	or Firm's	Name	Nu	mbe	*	_
مرم جر		J	_, . mm #					
County ada	-  -	Address						_
5E 1/2 21C 1/2 Sec. 22 , T. 3 N/S, R E/	VI .	-	•					
5E 1/2 1/2 1/2 Sec. 2 , T. 3 N/S, R/E/	۲)	Signed 8	v		Date			

# STATE OF IDAHO

USE TYPEWRITER OR BALLPOINT PEN

### WELL DRILLER'S REPORT

State law requires that this report be filled with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER	7.	WATE	R LĒV	EL	•			
Norma DAUL GASKELL	Static water level feet below land surface.							
	Flowing?  Yes O'No G.P.M. flow							
Address 9/0/ DALTON PLICE Owner's Permit No. BUISE, IDAIN \$3704	Controlled by:  Velve  Cap  Plug							
Owner's Permit No.	Temperature 52 OF. Quality							1
2. NATURE OF WORK	S, WELL TEST DATA							1
New well	_	(25 Pui	np	0 8	aller D Air D			_)
Abandoned (describe metrics of sourcement)	_	Hacharge 1.5	G.P.M.	$\dashv$	Pumping Level 14 FCCT	Hours Pu	mord	4
**		<u> </u>			14 141			_
3. PROPOSED USE				-				-
ØKDomestic □ Irrigation □ Test □ Municipal	9.	LITH	progi	C LO	G			1
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection	Hole		th		Manadal		Water	_
Other (specify type)		From	To S		Material GP Soil-		Yes N	읫
4, METHOD DRILLED	8	5	20		SANOT ESMEL			<u> </u>
☐ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary	6_	20	3.5		SAND & GRAVE		<del> X </del> -	-[
CCable Dug Other	-	4-1	51	Ι.	SANUT CLAY		<u>                                     </u>	<u>z</u>
		45	67		4155AVO		M.	-1
5. WELL CONSTRUCTION	-	67 72.	42	۳	CARREL SAND		154	اح
Casing schedule: 154 Steel   Concrete   Other						<del></del>	-	-
2.6 C' Inches 6 Inches + leet _7_1eet			<del> </del>	┝				_[
loches loches feet feet						<del></del>		-¦
Inches Inches feet feet feet				-				_
Was casing drive shoe used? TXYes INo Was a packer or seal used? I Yes IXNo								-
Perforated?		<del>├</del> -	$\vdash$					_
How perforated?   Factory   Knife   Torch								_
Size of perforation inches by Inches Number Frem To				⊢	<del></del>		+++	-
perforations feetfeet							1	_
perforations feet feet feet feet				-			╅┪	-
Well screen installed? I Yes SYNo					DECEN			_
Monufacturer's name Model No  Type Model Nofeet tofeet tofeet tofeet to				-		-	┼╌┼	-
Diameter Slot size Set from feet to feet				匚				_
Olemeter Slot size Set from feet to feet Gravel packed? Yes No Size of gravel	·	ļ		<u> </u>	JUN 7 172	1 6,,,,	+-	_
Placed from feet to feet					Department of Weter P			_
Surface seel depth 20 Meterial used in seel: Cement grou	<b>`</b>	-	<u> </u>	├			╌	-
Seeling procedure used: Sturry pit Tomp, surface casing					<del> </del>			_
Method of joining casing: Threaded SCWelded Solvent	' —	-	<del> </del>	-			+	_
Weld		二	二					_
Camented between strata  Describé access port	10	<b>L</b>				_		
		W	ork sta	rted .	10-11-52 Inlahe	d 10-7	-0 C	_
8. LOCATION OF WELL	1				TIFICATION			
Sketch map location must agree with written location.					t all minimum well cons the time the rig was rem		lardė wei	<b>/</b>
N Subdivision Name				4	_		400	
BENOKSIDE PLACE	.	Firm	Name	00	INSCLUEUL DO	Firm No	707	_
· · · · · · · · · · · · · · · · · · ·	1	Add	m 2	221	Official Story	Date /CT	23-8	Í
Lot No 3 Block No			د م الا منظ المد	E1	Official Trans	رم نبح	11129	_
		2197	eu 07 (		orricial)			-
County	.				erator)			_
1 W X NE X Sec. 11 , T. 3 N/9, R. 1 E/M	-			•				
USE ADDITIONAL SHEETS IF NECESSARY -	FORV	ARD 1	HE	HTE	COPY TO THE DEPART	TMENT?		

Partment of Water Administration

WELL DRILLER'S REPORT.

State law requires that this report be filed with the State Recismation. Engineer within 30 days after completion or abandonment of the well.

	Bis	2011
1.18.		<i>//</i>

Within 30 days area complet	7.3
1. WELL OWNER	7. WATER LEVEL 1
Name Jack Vincent	Static water level \ \ \ \ \ \   feet below land surface
Address 6934 Brentwood Baise	Flowing? D. Yes D. No G.P.M. flow F. Cuelity
Address 6939 Brentwood 5015e	Artesian closed in pressurep.s.i.
Owner's Permit No.	Controlled by :   Valve   Cap   Plug
	8. WELL TEST DATA
2 NATURE OF WORK	
I Powwell Consequence of the placement	□ Pump □ Bailer □ B Other ☐ Comp
Abendoned (describe method of abendoning)	Discharge G.F.M. Draw Down Hours Pumped
	The second section of the second section is a second section of the second section is a second section of the second section is a second section of the second section is a second section of the second section is a second section of the second section is a second section of the second section is a second section of the second section of the second section is a second section of the section of the sect
3. PROPOSED USE	The second of the second of the second
[1] [1] (4) (1) (2) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	9. LITHOLOGIC LOG
D. Domestic D Irrigation   D Test	
☑ Municipal. □ Industrial □ Stock	Diem. From To Yes No.
4 METHOD DRILLED	6 D S CLAY
	6 5 42 Grave / 15
☐ Cable ☐ Rotory ☐ Dug ☐ Other	6 80 96 Yellow Clay
The second secon	6 75 97 Yellow Sand
A CONTRACTOR OF THE PARTY OF TH	a list carse Sand
B. WELL CONSTRUCTION     Diameter of hole   Inches   Total depth       Cesing schedule:     Steel               Concrete                   Total depth                   tal depth                 Total depth                 Total depth                 Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth             Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth             Total depth             Total depth               Total depth               Total depth             Total depth             Total depth             Total depth             Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth               Total depth                 Total depth               Total depth               Total depth                 Total depth               Total depth                 Total depth                 Total depth                   Total depth                 Total depth                 Total depth                   Total depth                 Total depth                   Total depth                   Total depth                 Total depth                   Total depth                     Total depth	
Casing screeding Street Toleranter Tolerante	
Collingues   Inches   Collingues   Collingues   Inches	
1915 777 Cinches   Inches   In	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
inches   Inches   feet	The state of the s
Inches Inches feet	
Was a packer or seel used?	
THE Perforated?	
Size of perforation 111 inches by inches	
A STATE OF STATE OF THE PROPERTY OF THE PROPER	
perforations feet feet feet	
perforations feet feet  Well screen installed?	
Well screen installed? The series with the ser	
Type Model No.	
Olemeter S Slot size 30 Set from 124 feet to 131 feet	
A STATE OF THE PARTY OF THE PAR	
Graves packed/ Lt. Test Mileo! Size of Brand	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Placed from	
Surface seal? 7 2 Yes D No To what depth fept	The state of the s
Material yeard in seal A.C. Coment grout   @ Ruddling clay	
6 LOCATION OF WELL	The state of the s
Sketch map location must agree with written location;	10
	Work started 10 ct 1 finished Nav.
	THE PROPERTY OF THE PROPERTY O
(1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11. DRILLER'S CERTIFICATION TO THE THIRD WAS CERTIFICATION TO THE THIRD WAS drilled under my supervision and this report is
<b>一种,这种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种</b>	setrue to the best of my knowledge.
	国人是特别人 安全的 新发生 医牙孔 化
<b>学是是这种种的。</b>	Rax Fraleman Number 4
<b>以上,一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个</b>	To printed on flume Name
THE RESERVE OF THE PARTY OF THE	A Comment of the Comm
TEN BOUND Secul DIT TO B N/S H. THE FAME	Signed By Date v
A CONTRACTOR OF STANDARD STAND	

#### USE TYPEWRITER OR BALLPOINT PEN

# DEPARTMENT OF WATER RESOURCE

## WELL DRILLER'S REPC

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

I. WELL OWNER	7. W	ATER	LEVEL	•				
Name Hessing Leasing .	Static water level / 8   feet below land surface. Flowing?   Yes   No.   G.P.M. flow							
Address	T	emperi	sture .	OF. Quality			-	
Owner's Permit No.	Ć	ontroll	ed by:	in pressure p.s.i.	Plug			
2. NATURE OF WORK	8. WELL TEST DATA							
	DPump Beller BOther Ain Compasse w							
Abandoned (describe method of abandoning)	Dh	Discherge G.P.M.   Drewdown   Hours Fur						
3. PROPOSED USE								
☐ Domestic 💢 Irrigation 🗆 Test 🗓 Other (specify type)	9. 1	.ITHO	LOGIC	LOG				
☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection	Hale Diam.		To	Motorial		Wote Yes		
4. METHOD DRILLED	8	0		Top Soil			Ŋ	
N Cable □ Rotery □ Dug □ Other		5	25	Commented Gran	4	X	긤	
PA Cable Co Hotely — — — — — — — — — — — — — — — — — — —		85	73		Q	X		
5. WELL CONSTRUCTION		33	79	Sandy Clay		又	<u> </u>	
Diameter of hole 8 Inches Total depth 69 feet	<b></b> -	4/4	52	Red Sand		凶		
Coving enhancials: C Steel C Concrete		22	69	Course Sand				
Thiskness Dismeter + From feet 5 4 feet		├						
inches feet feet								
Inches Inches feet feet	<u> </u>	<del> </del>			<del></del>	-	$\vdash$	
inches inches feet feet inches inches inches inches feet feet inches inches feet feet feet inches inches feet feet feet inches inches inches feet feet feet feet feet feet feet fe								
Was casing differ alog need. Mr. 12.	<u> </u>	<u> </u>		-mearing		₩	-	
Was a packer or seal used?   X Yes   No Perforated?   Yes   S No	<b>-</b>			W. C. C. C. C. C. C. C. C. C. C. C. C. C.				
How perforated?   Factory   Knife   Torch				100		┾┙		
Size of perforation inches by inches	⊢	<del>}</del>		APR 2.3 196	J			
Number Frim Te				Department of Weter R	esoures	┼—	-	
perforations feet feet perforations feet feet perforations feet feet	<u> </u>		<del> </del>	Western Regional	<u>illies</u>	十	╁┈	
	-	$\vdash$	<del> </del>			匚		
Well screen installed? M Yes I No						╀	┼─	
Manufacturer's name Ook Type 304 Model No Diameter 8 Slot siz 050 Set from 69 feet to 64 feet	<u> </u>	┼	┼─	_ <del></del>		上	二	
Diameter 8 Slot size 0.5 B Set from 6.4 feet to 6.7 feet Diameter 8 Slot size 0.25 Set from 6.4 feet to 6.9 feet						Ţ_		
Gravel packed? Yes TEL No Size of gravel	1		<del> </del>	<del>                                     </del>		╁	┼-	
Placed fromfeet tofeet Surface seel death /9 Material used in seal:	H	1	$ar{}$	N N		T		
☐ Puddling clay Well cuttings		_ A	2 200	1965		┼╌	╁	
Sealing procedure used: Slurry plt Temporary surface casing	-	-				I	1_	
Overbare to seel depth	De	time	of We	et Keronichz	_:	士	1_	
6. LOCATION OF WELL		1				ــــــــــــــــــــــــــــــــــــــ	ــــــــــــــــــــــــــــــــــــــ	
Sketch man location must agree with written location.	10.	We	ork start	ed 27 May 82 finds	hed 1 Jan	<u> </u>	2_	
X Subdivision Name	- 11.			ERTIFICATION				
w	.	Firm	Name ,	DI W Phipps	Firm No.	<u> 33</u>	<u>2.</u>	
Let No Block No	-			1068 Boutlay	0ate 5.7	لعما	8	
County	_	Signe	d by (F	Irm Official)	Delly	<b>-</b>		
NE & NEX Sec. 13, T. 3 N/B. R. 1 E/y	<b>,</b>			(Operator)			<u></u>	
	1							

WELL DRILLER'S REPO

State law requires that this report be filled with the Director, Department of Water Resources within 30 days after the completion or ebandonment of the well.

	,	WATE	RIEV	/E1			_	
1. WELL OWNER	٠.							
Name Boise Water Corp.		Static	weter <u>l</u>	evel 37 feet below la	nd surface.			
Address 8150 W. Victory		Flowin	197 C	Yes @No G.P.M. flo			÷	
Address		Contro	olled by	:   Valve   Cap (	 ]] Plug			
Owner's Permit No.				OF, Quality			_	
Online 7. (1.11)(1.11)	_							
2. NATURE OF WORK	8.	8. WELL TEST DATA						
New well Deepened Deeplecement	ŀ	XX Pur	מת	□ Bailer □ Air □	Other		÷	
Abandoned (describe method of shandoning)							_	
		60			2_			
	8	60 -	-	212	2			
1. PROPOSED USE	9	51_		237		_2		
<del></del>	<del>                                     </del>	023		237 <u> </u>			_	
Domestic Ci Irrigation Ci Test Ci Municipal	9.	LITH	orogi	C LOG	•			
☐ Industrial ☐ Stock ☐ Weste Disposel or Injection ☐ Other (specify type)		Dep		Material		Wat Yes		
U Other		From			<del></del>		<u>~</u>	
4. METHOD DRILLED	10.	1	1	gravel	clay		ż	
		3	65	topsoil & brown commented sand &	gravel		X	
Retary   Air   Hydraulic   Reverse rotary   X   Cable   Dug   Other				streaks of olay-			X	
	<del> </del>	70	7.H	brown clay stranks of camen	ted sand			
5. WELL CONSTRUCTION				& brown clay		<u> </u>	<b>/</b>	
Casing schedule: BXSteel   Concrete   Other		211	275	blue clay			٤.	
Thickness Diameter From To		275	320	stracks of brown	стих ж	X	Ē	
• 375 Inches 18 Inches + 2 feet 349 feet		320	328	rine muddy sand sticky brown clay	y		Χ_	
Thickness   Diameter   From   349   feet   38   670   feet   675   f		l aba	365	blue clay		-	Ç-	
inches		365	380	cemented blue sublue clay	and	-	K_	
Was casing drive shoe used? A Yes No		1,60	1,68	stresks of brow	n clay 💃			
Was a packer or seel used? X Yes □ No				camented sand		┼─	<u> </u>	
Perforated?		1168	615	blue clay streaks of blue	clay &	<del> </del>	Α.	
Size of perforation Inches by Inches		615	1021	fine muddy sand		X		
· · · · · · · · · · · · · · · · · · ·		1.620	628	fine blue sand		X_	Ŀ	
perforationsfeetfeetfeet	ļ	628	630	sandy blue clay	-i20	┼	<b>~</b>	
Perforations feet feet feet feet feet feet		1-630	.571	blue sand		K	匚	
Well screen Installed? X Yes No		670	675	blue clay		-	<u>x</u>	
Menufacturer's name Johnson Type stainless steel Model No. 3011 Diameter 10 Stot size 30 Set from 61912 eet to 670 feet						╁	⊢	
Diameter 10 Slot size 30 Set from 619 2 aet to 670 feet		╄╾	-	Packer assemble	set from		匸	
l filmento Blatchia Cat from 1881 In 1881				3111 to 310 t			<u> </u>	
Gravel packed? XX Yes  No  Size of gravel #8 sand Placed from 318 13 feet to 675 feet		-		TO THE PARTY OF TH	<del>///!!</del> ////	╌	╀╌	
Surface seal depth 21. Material used in seel: XIII Cement grout		<del>                                     </del>	-	86 12	<del>' (5</del>			
☐ Puddiling clay ☐ Well cuttings					<u></u>		$\sqsubset$	
Sealing procedure used:   Slurry pit EXTemp, surface casing  Overbore to seal depth		I	_	oct 21	1981	┼	┿	
Method of joining casing:   Threaded X Welded   Solvent	<u> </u>	┼──	┼─	Department of Y/a	er Resources	-	士	
Weld				Department Regin	nai Oliice	1	Ļ	
Cemented between strate	10	L		•				
Describe access port	"	W	ork sta	rted 6/18/81 finish	ed 9/21/0		_	
	1							
& LOCATION OF WELL	"			CERTIFICATION				
Sketch map location must agree with written location.	1	1/44	) certif	y that all minimum well cons th at the time the rig was rem	eruction stand: Haved.	aus w	· • • •	
Subdivision Name <u>Maple Hill</u>	4	-				2		
	1			W.E. Stevens & Sc				
W	1	A data	37	09 Hawthorne Dr.	Date 10/10	/81		
Lot No. 9 Block No. 1	1				y .,		<u> </u>	
LUCINO BROOK 1144	1	Signe	id by (I	Firm Official)	<del></del>	51.1	Z	
8				and	M&T.		7	
County Ada N/E N/E 14 3		·.	•	(Operator)	VASD	w,	V	
N/E N/E N Sec. 14 , T. N/B R E/P				·				
				UTE CORY TO THE DERAR	TAICHT			

## STATE OF IDAHO DEPARTMENT OF WATER RESOURCES

#### WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER		WAT	ER LE	VEL					
Name Steered Resource Horogoment Inc., Address 200 N 4 th Su. te 206 Boise IDAH		Static	water	level	11.2	feet below	land surface,		
Address 200 N 4 Suite 206 BOISE IDANK	1	Artes	ian clos	ad-In	pressure	G.P.M. I	ki.		
Owner's Permit No. <u> </u>		Temp	orature	,	OF,	Quality			
2. NATURE OF WORK	8.	WELI	L TEST	DAT	TA.			_	
© New well □ Despend □ Replacement			mp	0	Bailer	O Air	Other	<del></del> -	
<ul> <li>Abandoned (describe abandonment procedures such as meterials, plug depths, etc. in lithologic log)</li> </ul>		Discharg	м. <b>ч</b> .		Pu	mping Lavel	Hours	umped	
									_
3. PROPOSED USE				_					
☐ Domestic ☐ Irrigation ☐ Test ☐ Municipal	9.	LITH	orogi	C LC	)G	11			
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other ☐ ☐ For 19 (specify type)	Bore					Material	<del></del>		ter
	Ulam.	0	10		541	1d4 51	1F	-   Yes	No
4. METHOD DRILLED	111	4	11. 2	6	10150	Sind	9,4,01		4
Rotary Air   Hydraulic   Revene rotary	4"	V/. 2.	10	C 2	20154	Sand i	9-4101	<u></u>	
☐ Cable ☐ Due ☐ Other	3"	10	35	4	20150		grave/		<u> </u>
		-	7.			max.	# n n l	<u> </u>	
5. WELL CONSTRUCTION	3_	35	43	2	17 5	Fina.	sand	$\pm$	
Casing schedule: Steel D Concrete (BrOther PVC				_				$\top$	
Thickness Diameter From To  0.25 inches 4" Inches + 0 feet 20 feet					-				
Inches Inches feet feet									_
Seh. 40 Inches 2" Inches 0 feet 43 feet			_			<del> </del>			-
Inches feet feet									-
Was casing drive shoe used?									
Was a packer or seel used?									
How perforated?  Factory  Knife  Torch							<del></del>		-
Size of perforation Inches by Inches						•	<del></del>	+	H
Number From To				-					
perforationsfeetfeetfeetfeetfeet								-	
perforations feet feet								+	$\vdash$
Well screen installed? Signs   No					<del></del>			+	
perforations   feet   feet   feet									
Diameter 2" Slot size. 02. Set from 2.3 feet to 38 feet							<del></del>	+	_
Diameter Slot size Set from feet to feet								╅┈	
Gravel packed? Prot I No I Size of gravel 50nd P									
Pleased fromfeet tofeet Surface seel depth Material used in seel: Cement grout									
☐ Bentonite ☐ Puddling clay ☐									$\vdash$
Sealing procedure used: 🖾 Siurry pit 🗆 Temp, surface casing								1-	
☐ Overbore to seel depth  Method of joining casing: ☐ Threaded ☐ Welded ☐ Solvent									
Weld									
☐ Comented between strata	1					<del></del>	<del></del>	لــــــــــــــــــــــــــــــــــــــ	Щ
Describe access port	10.				1-1.1		. 12/11	an	ł
		Wor	K Start	<b>-</b>	144 (	87 min	n 12/4	<u> </u>	
6. LOCATION OF WELL	11.	DRIL	LERS	ERT	IFICATI	ON			
Sketch map location must agree with written location.	,						truction stands	anda wa	I
N.						je rig was rame			· ·
Subdivision Name				21.	10.	Suns Co	Firm No. <u>4</u>	<b>-</b> ->	- 1
		On i	マッブ						- [
W ,		Y.O. I Addres	ンジア a ろみん	g	Boke	= IDAIter	Ben 12/19	187	, [
Lot No Block No				•		7751	7		-
		Signed	by (Fi	m O	fficial) _				_
Course & Ada				and	ı	W	h a-		ı
County POR			(6	Open	tor)	120			_
SW & SE & Sec. 12 T. 3 N/J. R. / EN.									· [

### APPENDIX M

SURVEY LOCATIONS AND ELEVATIONS FOR MONITORING WELLS 1 THROUGH 17

2250 N. MERIDIAN-RD.

MERIDIAN, IDAHO 83642

PHONE (208) 888-5222

December 18, 1987

Brad Harr Senior Client Service Representative Special Resource Management, Inc. 200 North 4th Street - Suite 206 Boise, Idaho 83702

Re: Westpark Ground Water Monitoring Project

Dear Brad:

4

At your request, on Friday, December 18, 1987, our personnel conducted a field survey to determine and report the horizontal locations and elevations of each of the thirteen (13) monitoring wells installed by Special Resource Management, Inc. on the above-referenced property.

Please find enclosed the field survey data and reference site map for the Ground Water Monitoring Wells located on the subject property, located in the area of West Emerald Street and Milwaukee Street, Boise, Idaho.

Of the thirteen (13) wells surveyed, well numbers 1, 12, and 13 had not been installed. Our survey crew placed reference survey hub and tacks (2" x 2" x 6" wood stake) with a survey tack near the three sites and recorded the horizontal location and elevation of each. Well numbers 2 and 3 consisted of PVC stand pipes. The survey crew measured and recorded the horizontal location and elevation at the top of each of the PVC stand pipes. All remaining wells, numbers 4 through 11, consisted of steel-cased monitoring wells with concrete bases placed approximately one to two inches above existing ground. The survey crew measured horizontal locations and elevations at both the top of the steel casing and at the top of the concrete base.

Horizontal control for the well locations was established by tying the survey data to the boundary referenced on the site plan. The referenced bearing is indicated on the site plan as "Basis of Bearing". The referenced coordinate for the project is the intersection of West Emerald Street and Milwaukee Street (a found "PK nail"). Coordinates for this point were assigned North 5000.00, East 5000.00.

Brad Harr Senior Client Service Representative Special Resource Management, Inc. December 21, 1987 Page Two.

Elevations for the wells were established by referencing two benchmarks located on the subject site. The elevations of the benchmarks were reported as control for various engineering projects in the immediate vicinity, including the new Towne Square Mall.

Attached to this letter is a Site Plan and three Exhibits. The Site Plan includes the locations and identification of all wells on the site. Also on the map is a tabular listing of the wells and their horizontal locations and elevations. Exhibit No. 1 is an 8-1/2 x 11 vicinity map which also gives the approximate locations of each of the wells. Exhibit No. 2 is the same tabular data listed on the site map, and Exhibit No. 3 is a Radial Staking Report which ties all well locations to two reference corners by bearing and horizontal distance. The two reference corners were located and surveyed in the field and are also listed by horizontal coordinates on the Site Plan and on the enclosed Exhibits 2 and 3.

We appreciate this opportunity to be of service to you on this project. If you require added information or surveying on this or other projects in the area, please give us a call.

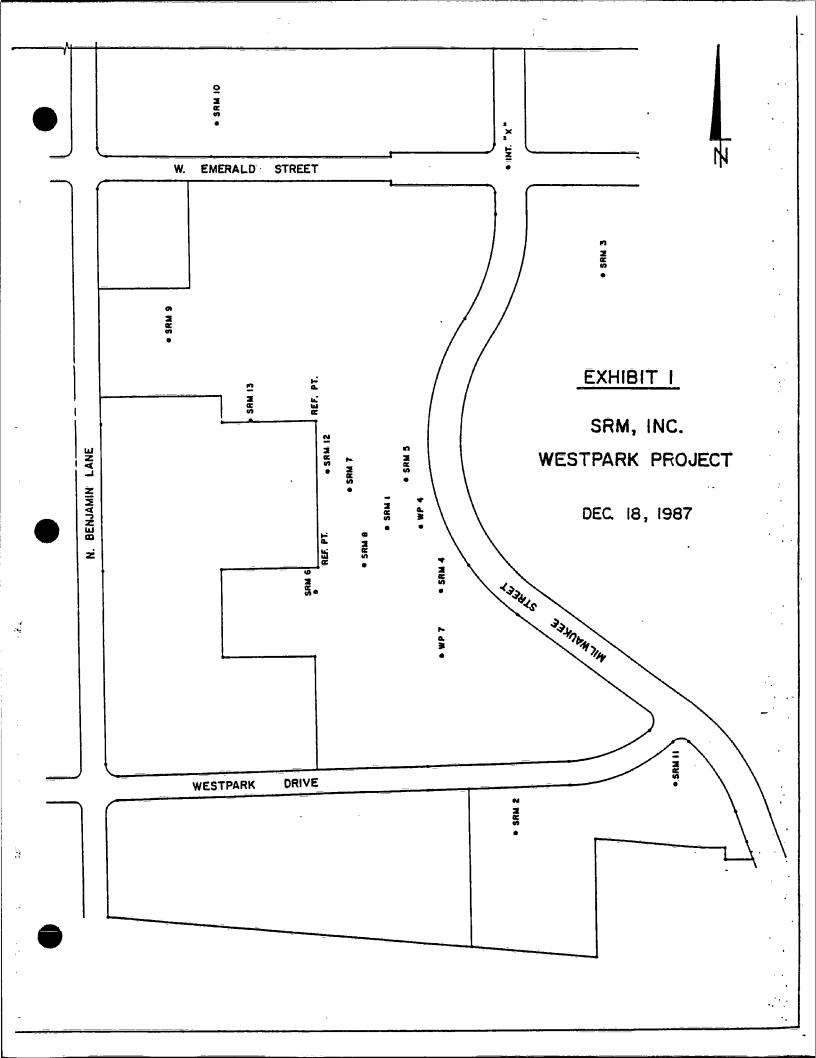
Sincerely,

Steven W. Hosac, P.E.

David G. Powell, E.I.T. HOSAC ENGINEERING, INC.

Enclosures

DGP/ab 17:14



# MONITORING EAGLE LOCATION DATA

# SPECIAL RESOURCE MANAGEMENT, INC. WESTPARK GROUNDWATER MONITORING PROJECT

### December 18, 1987

POINT No.	DESCRIPTION	NORTHING	EASTING	ELEVATION DATA			
				TOP STEEL WELL CASING	ADDITIONAL ELEV. & DESCR.		
1009	Emerald/Milwaukee Intx. (PK Nail)	5000.000	5000.000				
1038	Ref. Prop. Corner	4370.005	4509.480				
1043	Ref. Prop. Corner	4000.161	4512.078	·			
1000	WP-7 (Alum Cap)	3773.121	4810.291		2691.82 Bench Mark		
1035	WP-4 (Alum Cap)	4639.435	4766.992		2691.13 Bench Mark		
1105	SRM #1	3940.383	4816.443		2692.30 Ground Elevation		
1109	SRM #2	3328.467	4997.711		(Tack & Hub) 2695.97 Top PVC Stand Pipe		
1100	SRM #3	4725.873	5238.789		2692.13 Top PVC Stand Pipe		
1106	SRM #4	3940.383	4816.443	2694.47	2692.83 Top Conc. Base		
1104	SRM #5	4219.986	4732.176	2694.04	2692.23 Top Conc. Base		
1108	SRM #6	3937.636	4502.638	2691.83	2690.21 Top Conc. Base		
1103	SRM #7	4194.208	4585.453	2694.00	2692.31 Top Conc. Base		
1107	SRM #8	4004.350	4623.663	2694.12	2692.31 Top Conc. Base		
1111	SRM #9	4574.310	4148.372	2691.48	2689.82 Top Conc. Base		
1101	SRM #10	5117.692	4271.885	2690.64	2688.79 Top Conc. Base		
1110	SRM #11	3448.165	5407.204	2696.56	2694.67 Top Conc. Base		
1102	SRM #12	4239.911	4538.027		2691.23 Ground Elevation		
1112	SRM #13	4374.976	4346.695		(Tack & Hub) 2691.01 Ground Elevation (Tack & Hub)		

ENGINEERS

PLANNERS

SURVEYORS

cosc N. Miller (An. 10

WALDAN DARK BOWN

PHONE (208) 988-5222

January 14, 1988

Brad Harr Special Resource Management, Inc. 200 North 4th Street - Suite 206 Boise, Idaho 83702

Re: Westpark Groundwater Monitoring Project

Dear Brad:

At your request, on Wednesday, January 13, 1988, our personnel conducted additional field surveying to determine and report the horizontal locations and elevations of Well Numbers 14, 15, 16, and 17, on the above-referenced project.

The existing Monitoring Well Survey Map and Exhibit 1 Map compiled December, 1987, have been revised to include this well data. The maps have been further revised to show the approximate locations of existing structures, as requested.

Please find enclosed with this letter the revised Exhibit 1 (Vicinity Map), Exhibit 2 (Monitoring Well Location Data), Exhibit 3 (Radial Stakeout Report), and nine copies of the 24" x 36" Monitoring Well Survey Map.

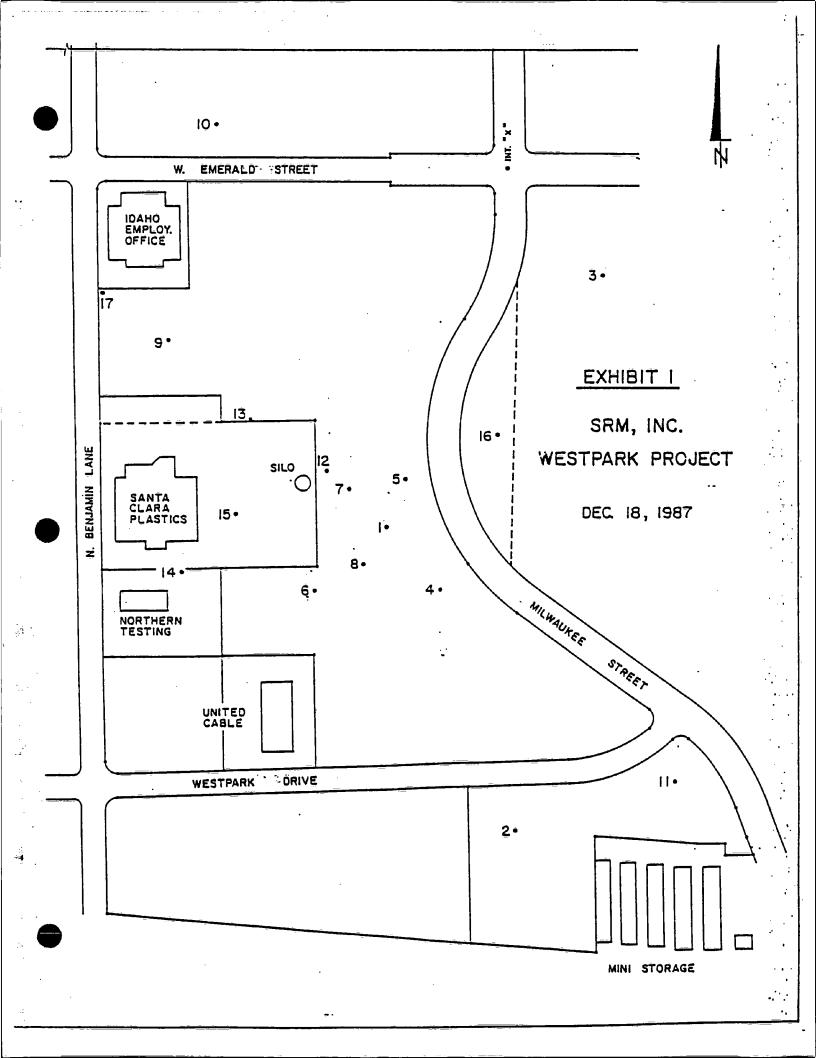
We appreciate this opportunity to be of service to you on this project. If you require further assistance with this project, please give us a call.

Very truly yours, Steven W. Hosac, P.E.

David G. Powell, E.I.T. HOSAC ENGINEERING, INC.

Enclosures

DGP/ab 17:28



# EXHIBIT 2 MONITORING WELL LOCATION DATA FOR

# SPECIAL RESOURCE MANAGEMENT, INC. WESTPARK GROUNDWATER MONITORING PROJECT

### Revised January 14, 1988

POINT	DESCRIPTION	northing	EASTING	ELEVATION DATA				
No.	<u></u>			TOP STEEL WELL CASING	ADDITIONAL	ELEV. & DESCR.		
1009	Emerald/Milwaukee Intx. (PK Nail)	5000.000	5000.000					
1038	Ref. Prop. Corner	4370.005	4509.480					
1043	Ref. Prop. Corner	4000.161	4512.078					
1000	WP-7 (Alum Cap)	3773.121	4810.291		2691.82	Bench Mark		
1035	WP÷4 (Alum Cap)	4639.435	4766.992		2691.13	Bench Mark		
1105	SRM #1	3940.383	4816.443		2692.30	Ground Elevation (Tack & Hub)		
1109	SRM #2	3328.467	4997.711		2695.97	Top PVC Stand Pipe		
100	SRM #3	4725.873	5238.789		2692.13	Top PVC Stand Pipe		
1106	SRM #4	3940.383	4816.443	2694.47	2692.83	Top Conc. Base		
1104	SRM #5	4219.986	4732.176	2694.04	2692.23	Top Conc. Base		
1108	SRM #6	3937.636	4502.638	2691.83	2690.21	Top Conc. Base		
1103	SRM #7	4194.208	4585.453	2694.00	2692.31	Top Conc. Base		
1107	SRM #8	4004.350	4623.663	2694.12	2692.31	Top Conc. Base		
1111	SRM #9	4574.310	4148.372	2691.48	2689.82	Top Conc. Base		
1101	SRM #10	5117.692	4271.885	2690.64	2688.79	Top Cond. Base		
1110	SRM #11	3448.165	5407.204	2696.56	2694.67	Top Conc. Base		
1102	SRM #12	4239.911	4538.027		2691.23	Ground Elevation		
1112	SRM #13	4374.976	4346.695		2691.01	(Tack & Hub) Ground Elevation		
1077	SRM #14	3983.157	4173.204	2692.43	2690.48	(Tack & Hub) Top Conc. Base		
1076	SRM #15	4128.191	4307.839	2693.70	2691.80	Top Conc. Base		
1080	SRM #16	4332.834	4963.077	2693.50	2691.51	Top Conc. Base		
1082	SRM #17	4692.866	3981.162	2690.99	2689.03	Top Conc. Base		

# EXHIBIT 3 ...ADIAL STAKEOUT REPORT FOR

# SPECIAL RESOURCE MANAGEMENT, INC. WESTPARK GROUNDWATER MONITORING PROJECT

### Revised January 14, 1988

RADIAL STAKEOUT

FROM DO	BEA	RING	ANGLE	DISTANCE	TO	NORTH	EAST	ELEV
FRUM PU	ĪMI 4	# L,	,BNUKSIGNI	FOIMI #1 .	1043 PROP	4000.1013	4512.0779	
						4370.0055	4509.4804	
			24'09"   SET # : -	.1	11101	Juli		
ENTER PO 080,108	OINT	5 IN	SET, SEPA	ARATED BY A	COMMA :	1000,1035,	1009,1100-1112,	,1076,1077,1
1038	SE	25	44'48"	668.40			4810.2910	2691.8200
1038	NE	43	42'16"	372.70	WPK- 1035 WPK-	4639.4350	4766.9917	2691.1300
1 038	NE	37	54'17"	798.44		5000.0002	4999.9996	
1 Ø 3 8	ΝĒ	63	59'23"	811.50		4725.8732	5238.7888	2692.1300
1 038	NW	17	37'44"	784.53		5117.6919	4271.8850	2688.7900
1038	SE	12	22'35"	133.19		4239.9113	4538.0272	2691.2300
1038	SE	23	22'20"	191.51		4194.2084	4585.4533	2692.3100
1038	SE	56	02'01"	268.51		4219.9855	4732.1757	2692.2300
1038	SE	32	29'02"	322.40	1105	4098.0467	4682.6297	2692.3000
1038	SE	35	32'44"	528.02		3940.3827	4816.4428	2692.8300
1038	SĒ	17	20'31"	383.07	SRM 1107 SRM	4004.3498	4623.6631	2692.3100
1038	sw	0	54'24"	432.42		3937.6357	4502.6378	2690.2100
1038	SE	25	06'55"	1150.29	1109	3328.4671	4997.7113	2695.9700
1038	SE	44	14'26"	1286.74	SRM 1110	3448.1647	5407.2041	2694.6700
1038	NW	60	30'00"	414.90		4574.3104	4148.3716	2689.8200
1038	NW	88	15'04"	162.86		4374.9760	4346.6949	2691.0100
1 038	sw	39	49'25"	314.85		4128.1909	4307.8391	
1038	sw	40	59'58"	512.58		3983.1567	4173.2043	¥
1 0 3 8	SE	85	18'54"	455.12		4332.8336	4963.0765	
1 Ø38	NW	58	34'14"	619.16	SRM 1082 SRM	4692.8663	3981.1624	

# EXHIBIT 3 ADIAL STAKEOUT REPORT

#### FOR SPECIAL RESOURCE MANAGEMENT, INC. WESTPARK GROUNDWATER MONITORING PROJECT

### December 18, 1987

RADIAL STAKEOUT

FROM POINT 4 [ BACKSIGHT POINT 4] : 1033   1043   4000.161   4512.076   FROP COR	FROM			3/ANGLE			NORTH	EAST	ELEV
S	FROM PO	INT	# Ĺ	,BACKSIGHT	PUINT #1 :			4512.078	
S						PROP	COR		
STAKE POINTS IN SET # : -  FORTER POINTS IN SET # : -  FORT								4509.480	
STAKE POINTS IN SET # : -I ENTER POINTS IN SET, SEPARATED BY A COMMA : 1000,1035,1009,1100-1112  SET #-I 1036	85	SE	Ø	24'09"		1 110			
ENTER POINTS IN SET, SEPARATED BY A COMMA : 1000 ,1035,1009,1100-1112  SET #-1  1036 SE 26 44'46"					·i				
1038 SE 26 44'46" 688.40 1000 3773.121 4810.291 2691.820 WPK-7 1038 NE 43 42'15" 372.70 1035 4639.435 4768.992 2591.130 WPK-7 1038 NE 37 54'17" 798.44 1009 5000.000 5000.000 CL CL CL SKM 3 1038 NE 63 59'23" 811.50 1100 4725.873 5238.789 2692.130 SKM 3 1038 NW 17 37'44" 784.53 1101 5117.692 4271.885 2688.790 SKM 10 1038 SE 12 22'35" 133.19 1102 4239.911 4538.027 2691.230 SKM 12 1038 SE 23 22'20" 191.51 1103 4194.208 4585.453 2892.310 SKM 12 1038 SE 32 23'02" 322.40 1103 4194.208 4585.453 2892.310 SKM 5 1038 SE 32 23'02" 322.40 1104 4219.986 4732.176 2592.230 SKM 12 1038 SE 35 32'44" 528.02 1106 3940.363 4816.443 2692.830 SKM 1 1038 SE 17 20'31" 383.07 1107 4004.350 4623.663 2692.310 SKM 4 1038 SE 17 20'31" 383.07 1107 4004.350 4623.663 2692.310 SKM 4 1038 SE 25 06'55" 1150.29 1108 3937.636 4502.638 2692.310 SKM 6 1038 SE 25 06'55" 1150.29 1108 3937.636 4502.638 2692.310 SKM 6 1038 SE 44 14'26" 1268.74 1110 3448.165 5407.204 2594.670 SKM 1 1038 NW 60 30'00" 414.90 1111 4574.310 4148.372 2609.820 1038 NW 60 30'00" 414.90 1111 4574.310 4148.372 2609.820 1038 NW 60 15'04" 162.86 1112 4374.976 4346.695 2691.010	ENTER F	TMIC				COMMA :	1000,1035,1	009,1100-1112	
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